

# **Strategic analysis of Statoil's international competitiveness**

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## **ABSTRACT**

The oil industry is becoming increasingly competitive and with the rising nationalisation of resources, international oil companies are struggling to secure access to new oil and gas reserves. Statoil faces challenging tasks as it seeks to move from a protected home market to the extremely competitive international arena. Its ambitious internationalisation strategy relies heavily on getting access to new oil and gas reserves and large investments in new and leading technology. However, Statoil needs to consider different growth alternatives to increase its international competitiveness. In this paper, we recommend the proposed merger with Norsk Hydro to be the most politically feasible alternative. Nevertheless, we question whether this will give Statoil sufficient international strength required for the fiercely competitive international arena. Consequently, Statoil might have to consider other growth alternatives even after the merger or adapt its business model to better fit the needs and requirements of the industry today.

# **PART 1: INTRODUCTION**

## **CHAPTER 1: SUBJECT PROPOSITION**

### **INTEREST IN THE SUBJECT**

When choosing the subject for our thesis, our first criterion was to write about something that we are interested in. We have discussed the subject of mergers and acquisitions in several classes, and have found this field of business strategy particularly interesting. Thus, we were happy when Statoil announced its merger with Hydro in December last year. This provided us with a topic of great current interest, while simultaneously allowing us to have an international perspective on our thesis. Moreover, we saw this as a great opportunity to learn more about the global petroleum industry.

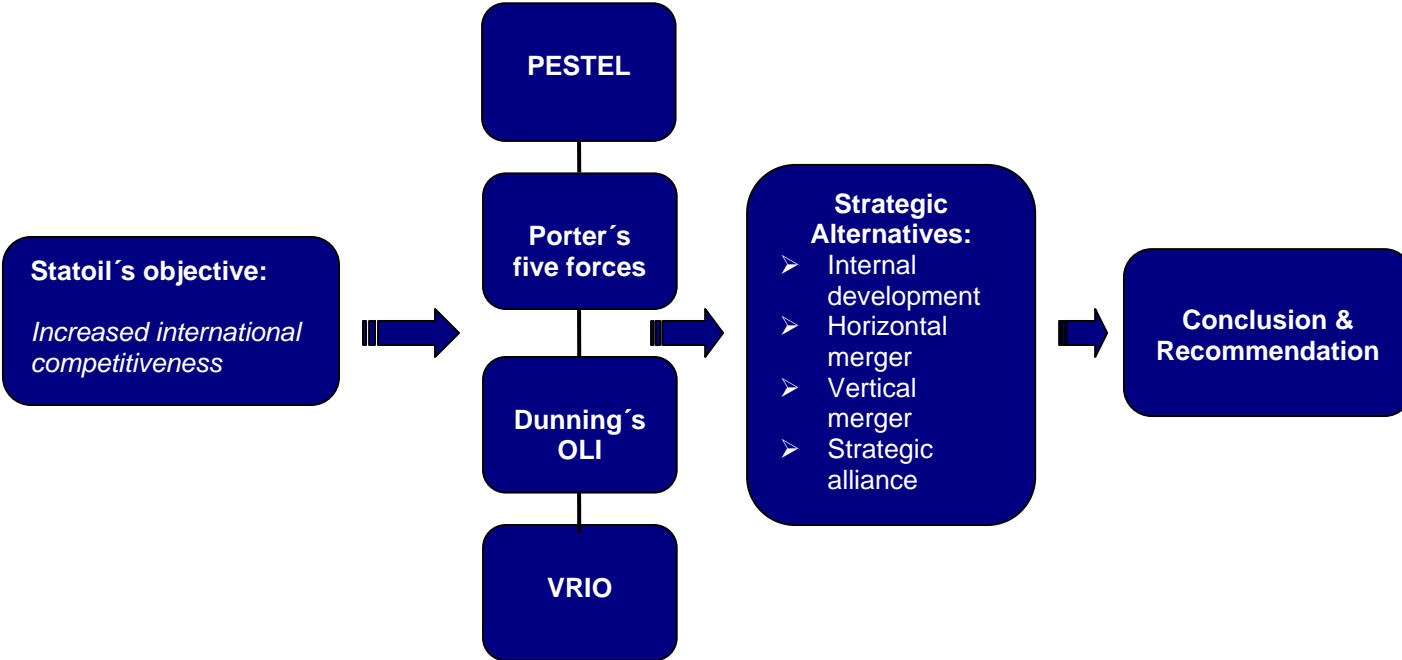
### **PURPOSE OF THE THESIS**

The purpose of this thesis is to discuss how Statoil can increase its international competitiveness and realize its international growth ambitions in the most effective manner. After all, this is the main rationale behind the announced merger with Norsk Hydro. However, we question if the merger with Hydro in fact is the best response to the challenges the company is currently facing in the industry. Consequently, we will evaluate other strategic alternatives on equal terms with this particular merger, and consider which would be the most beneficial for Statoil in its pursuit for increased international growth.

To reach a conclusion and provide a recommendation we will first analyze Statoil's external environment by using the PESTEL and Porter's five forces framework. With this we aim to identify the main industry trends and drivers of change, as well as the competitive forces shaping the industry. Then, we will apply Dunning's OLI framework to see whether Statoil fulfils the criteria to successfully undertake foreign direct investments. The aim of these analyses is to identify the critical success factors in the industry, and obtain a better understanding of Statoil's current strategic position. Further, with the resource based view and the VRIO framework, we will perform an internal analysis of Statoil to identify the resources and competences it currently possesses that can generate competitive advantage, and also

reveal the ones it currently lacks to better compete internationally. The aim is to match the internal strengths and weaknesses of the company with the external opportunities and threats. Finally, we will evaluate how Statoil could increase its international competitiveness in the best manner, by discussing four different strategic alternatives of pursuing an international strategy, namely: (1) internal development, (2) horizontal and (3) vertical merger and (4) strategic alliance. We will discuss the benefits and drawbacks of each expansion mode and evaluate to what degree they can provide Statoil with the resources and competences it currently lacks. Our conclusion and recommendation will be based on our own findings and personal judgement.

Figure 1: Structure of our thesis



PROBLEM SCOPE

Our goal is to give a recommendation on how Statoil can increase its international competitiveness, given its current strategic position in the market. Consequently, the main focus will be on Statoil's international operations. Moreover, we have chosen to concentrate on its upstream activities of the value chain, namely exploration and production of oil and gas. We will evaluate Statoil's strategic alternatives for increased international growth according to the same set of given criteria. However, as Statoil already has announced its intention to



merge with the oil and gas division of Hydro more emphasis will be put on evaluating this alternative.

As the oil and gas industry, or the petroleum industry, is often referred to as the oil industry we will use these terms interchangeably throughout our paper. Moreover, this also applies to the term (natural) resources which are sometimes used instead of oil and gas reserves. Also, as the industry is truly global we have chosen to perform the analyses on a more general basis, even if some of the theories are intended to evaluate the attractiveness between different locations. Overall, we have tried to look at the collected information objectively and have used various sources to observe different points of views. Nonetheless, all our analysis will be conducted with Statoil's "interests" in mind, as we are trying to answer how Statoil can increase its international competitiveness. As a result, we have deliberately not discussed the interest of the Norwegian state and the like in detail. Moreover, as we would like for anyone interested to read our thesis, we have chosen to keep it relatively simple when it comes to both the political and economic points of view. This way, it remains comprehensible even for those without any prior knowledge. Moreover, as we will use a number of abbreviations throughout the paper, we have added a glossary to the appendix for further explanations.

## LIMITATIONS AND ACKNOWLEDGEMENTS

Our main limitation has been to collect non-official information about Statoil and its intended merger with Hydro. At the time this paper is written, the merger process is not completed and consequently the merger process is very confidential due to economic and legal concerns. Moreover, as the effect of the merger is yet to be shown in the future it has been difficult to foresee the all-embracing benefits and drawbacks of such a solution. We had little prior knowledge of the oil industry before we started to write this thesis, and can not guarantee that all of our analysis provides a complete or correct picture of all the forces shaping and influencing the industry.

We would like to thank our advisor Christine Meyer for her invaluable insight in the field of mergers and acquisitions and advise in the choice of strategic theories. Moreover, we are extremely thankful to Eirik Wærness, Runar Tjersland and David Nunn in Statoil and Norsk Hydro that has taken the time to let us interview them. Even though they could not provide us with confidential material or information, their first hand knowledge about the businesses and

the industry was very helpful to us. We would also like to thank Hans Henrik Ramm for his assistance, providing us with a different and more critical view on the merger. Information collected through these interviews has been implemented with our best intentions, and we take full responsibility for possible misinterpretations.

## CHAPTER 2: METHODS USED TO OBTAIN DATA

The purpose of this chapter is to look at the research methods used to obtain data for this thesis. We have chosen to base our analysis on qualitative research as we believe this is the most suitable research method for our paper. Through qualitative research we can collect, analyse and interpret data in a subjective by using various methods of collecting information. If we were to use quantitative data we would be more restricted as the analysis is statistical and based on numbers and measurements<sup>1</sup>.

After the relevant literature on the theory part was analysed, the first step was to analyse the global oil industry to see how the current trends and challenges affects the companies in operation. Next, we gathered information on Statoil in order to understand its current strategic position in the industry. Finally, we searched for data that could provide us with information on the proposed merger between Statoil and Hydro, and other strategic alternatives that Statoil could pursue to better compete internationally.

We have collected secondary data from various sources such as:

- *Newspapers and articles.* To obtain background information and news on the merger, and compare different points of view, articles from various Norwegian and international newspapers were scanned and analysed in the period of December 2006 to June 2007. This provided us with a good understanding of the rationale for the merger and the possible consequences.
- *Companies' annual reports.* The annual reports of Statoil and Hydro were used to obtain company-specific information, but also information on current trends in the industry.

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<sup>1</sup> Bryman, A. (2005). *Social Research Methods*, 2<sup>nd</sup> edition, Oxford University Press.

- *Companies' websites.* The websites of Statoil and Hydro were used to gather specific information on the companies' products and services, as well as goals and strategies.
- *Market and industry reports* (International Energy Agency, USB Investment Research, Morgan Stanley Research, Datamonitor, HSBC and other). These reports provided us with valuable information on the global oil industry, market trends and changes, and information on the various actors in the industry.
- *Official statements/reports* (Proposition to the Storting, Merger Plan, OECD etc.) These papers gave solid information on the merger process from the companies' point of view, but also the authority's views on the matter.

To collect primary data for our thesis we chose to use semi-structured interviews as this encourages two-way communication and the purpose was to obtain general information on specific issues. We performed interviews with two employees in Statoil and one employee in Hydro. We have also interviewed one independent oil consultant to obtain a more external point of view of the matter. These are the names and positions of the people we interviewed:

- Eirik Wærness, *Director of Group Planning and Analysis*, Statoil
- Runar Tjersland, *Senior Vice President, Corporate Strategy*, Statoil
- David Nunn, *Senior Vice President, Portfolio Strategy*, Norsk Hydro
- Hans Henrik Ramm, *Independent petroleum consultant*

The interviews provided us with valuable insight into Statoil and Hydro's operations, the current challenges in the industry and the rationale for the merger. We used the information from these interviews to fill in the gaps in our analysis and to get an insider view. To be more critical towards the information on the companies and the merger, we also interviewed the external oil analyst who provided us with a more pessimistic view on the merger. We performed two of the interviews in person and two over the telephone as it was difficult to meet in person. All interviews apart from one were recorded on a tape recorder to be able to proof check the information obtained afterwards. All interviews except the first initial contact with Statoil were deliberately conducted at a late stage in our writing process, as we wanted to take advantage of gaining additional insight into topics that was unclear or unavailable through other sources of information.

## PART 2: PRESENTATION OF STATOIL

Statoil ASA was established as a wholly state-owned company in 1972, and is today a fully integrated oil and gas company with considerable international activity. The company was listed on the stock exchange and partially privatised in 2001, and the state currently owns 70.9 percent of the company. Statoil is today represented in 35 locations worldwide with its head office situated in Stavanger, Norway, and employs around 25 000 people. As an integrated oil company, Statoil manages the whole value chain; from exploration and development of oil and gas fields to operations of production platforms and retailing of gas and oil products. As the company mainly focuses on exploration and recovery, most of its income is derived from its upstream activities. The company has been very profitable in recent years, mainly as a result of high oil and gas prices. The company experienced a record profit of NOK 40.6 billion in 2006, compared to NOK 30.7 billion in 2005<sup>2</sup>.

Statoil enjoys a dominant position on the Norwegian Continental Shelf (NCS), where it is the largest operator. Combined Statoil controls 60 percent of the domestic oil and gas production. Its total production in 2006 was 1 135 000 barrels of oil equivalent (boe) per day, which corresponds to between five and six times Norway's oil consumption<sup>3</sup>. As a result, only Iran and Saudi Arabia's national oil companies (NOCs) trade more crude oil than Statoil, making the company the world's third largest exporter of crude oil. However, as the fields on the NCS are maturing and the company is struggling to replace its reserves, its future production and position is threatened. Nonetheless, Statoil aims to maintain an equity production of one million boe per day from the NCS after 2010<sup>4</sup>.

Today, Statoil's international production accounts for 16 percent of its total production. However, the company seeks to increase its international presence and competitiveness, and subsequently aims for an annual long-term growth of 2-4 percent from 2007-2010<sup>5</sup>. According to the company's annual report, Statoil will focus on building up an international portfolio and seek new partnerships in resource rich regions. Furthermore, it aspires to be

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<sup>2</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>3</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>4</sup> Statoil (2006), *Annual report*, available at <<http://www.statoil.com/INF/SVG03636.NSF?OpenDatabase&lang=en&app=2006year>>, 30.04.07

<sup>5</sup> HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07

acknowledged as a project developer with first-class expertise and technology. It also wants to increase value creation in manufacturing and marketing through improvements to the business, integration and world-class operations<sup>6</sup>. The company's announcement of the planned merger with Norsk Hydro's oil and gas division in December 2006 is also a result from the company's wish to enhance international growth.

**Figure 2: Snorre platform<sup>7</sup>**



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<sup>6</sup> Statoil (2006), *Annual report*, available at <http://www.statoil.com/INF/SVG03636.NSF?OpenDatabase&lang=en&app=2006year>, 30.04.07

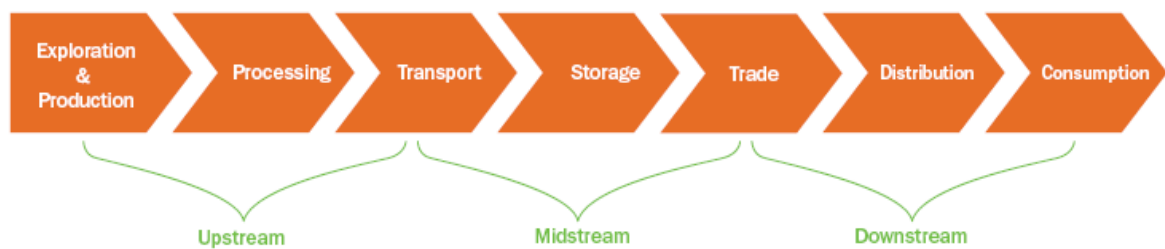
<sup>7</sup> Snorre Platform [http://www.ptil.no/NR/rdonlyres/F9608E69-81D1-440A-9BEF-7C088C766733/7305/snorre\\_a550x375.jpg](http://www.ptil.no/NR/rdonlyres/F9608E69-81D1-440A-9BEF-7C088C766733/7305/snorre_a550x375.jpg), 19.06.07.

# PART 3: THE GLOBAL OIL & GAS INDUSTRY

## CHAPTER 1: DEFINITION

The international oil and gas industry can be defined to include all companies that are involved in the oil and gas production value chain; from the owners of the resources to operators, drillers, equipment manufacturers, facility constructors, service providers and engineering companies. Nonetheless, in this paper we will focus on the integrated oil and gas sector, meaning companies that engage in the exploration and production of oil and gas, as well as at least one other major activity in oil refining, marketing or transportation<sup>8</sup>. However, for the purpose of this report our analysis will be based on their upstream activities, that is mainly exploration and production.

**Figure 3: The oil and gas value chain<sup>9</sup>**



## CHAPTER 2: INDUSTRY STRUCTURE

The traditional global integrated oil and gas companies can further be classified into three different segments: the international, the national and the independents.

### THE INTERNATIONAL OIL COMPANIES

The international oil companies (IOCs) are often referred to as the “majors”. They consist of companies like ExxonMobil, Royal Dutch Shell, BP, Chevron, Eni, ConocoPhillips and Total. They are characterized by having extensive skills and easy access to capital. Moreover, they

<sup>8</sup> ResearchandMarket, *Global Integrated Oil & Gas*, available at <[http://www.researchandmarkets.com/reports/340664/global\\_integrated\\_oil\\_and\\_gas.htm](http://www.researchandmarkets.com/reports/340664/global_integrated_oil_and_gas.htm)>, 01.03.07

<sup>9</sup> TNO, *Full value chain Gas market simulation*, available at <<http://www.tno.nl/downloads%5C308beno.pdf>>, 15.06.07

are capable of taking on significant investment risks, nonetheless in the pursuit of high returns. Normally, they manage a portfolio of large projects all over the world and promote technology development very actively.

## THE NATIONAL OIL COMPANIES

National Oil Companies (NOCs) are in most cases both owners and operators of fields in their home countries, like for example Saudi-Aramco (Saudi Arabia) and PDVSA (Venezuela). However, they are becoming increasingly international. This is typically to diversify investment risks or to secure supplies to meet the needs of their fast growing economies, which is important for companies in net-importer countries like China and India. These companies have become today's major resource holders, and together they control more than 90 percent of the proven global reserves. Moreover, they represent about 70 percent of worldwide oil and gas consumption<sup>10</sup>. The NOCs often manage their resources in a more long-term perspective compared to the private companies that are more eager to capture shorter-term profits. Moreover, the majority tends to be followers of new technologies rather than developers.

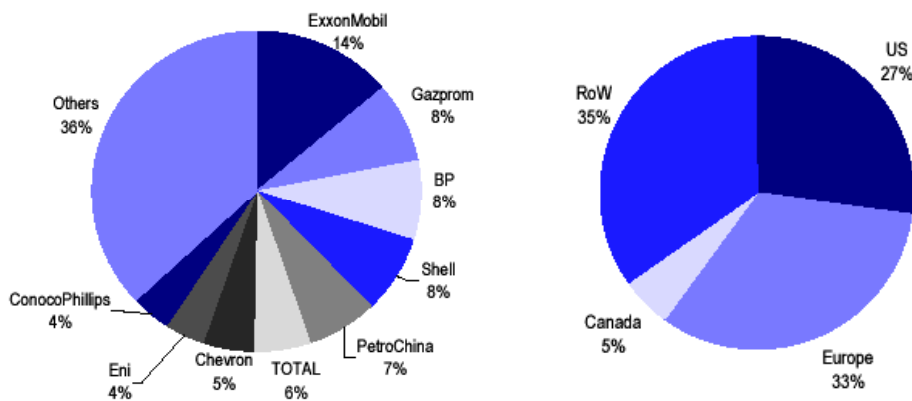
## THE INDEPENDENTS

The independents are smaller, private companies often specialising in smaller scale projects. They typically focus on specific geographical areas or types of reservoir. As they do not have the same financial strength as the majors, they are often skilled at managing older reservoirs and normally engage in projects offering rapid returns. Consequently, they are often innovative in developing new types of reservoirs and in leveraging their local knowledge.

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<sup>10</sup> UBS Investment Research (2006). *Oil Companies, Major- Global Analyzer*, UBS Limited, 05.12.06.

Figure 4: Global integrated oil companies by market capitalization and by region (2006)<sup>11</sup>



## CHAPTER 3: OPEC

OPEC plays an important role in the global oil industry as the majority of the remaining reserves are located in OPEC regions. OPEC stands for Organization of Petroleum Exporting Countries, and is an intergovernmental organization dedicated to the stability and prosperity of the petroleum market. OPEC membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization. OPEC has 12 countries as members<sup>12</sup>, which currently supply more than 40 percent<sup>13</sup> of the world's oil and control about 79 percent of the world's total proven crude oil reserves<sup>14</sup>.

## CHAPTER 4: RECENT HISTORICAL DEVELOPMENTS

In the past 50 years, the driving forces in the global oil and gas industry have changed dramatically. There have been shifts in the power structure of oil companies and the industry has experienced a wave of consolidation. In the 1950s and 1960s, the international majors dominated and had close to unrestricted access to oil and gas resources. Only 2-3 percent of the resources were maintained by national governments. However, this changed dramatically in the 1970s when members of OPEC began a wave of nationalisation of natural resources.

<sup>11</sup> UBS Investment Research (2006). *Oil Companies, Major- Global Analyzer*, UBS Limited, 05.12.06.

<sup>13</sup> Investopedia. The Industry handbook-Oil Services Industry, available at [http://www.investopedia.com/features/industryhandbook/oil\\_services.asp](http://www.investopedia.com/features/industryhandbook/oil_services.asp), 15.04.07

<sup>14</sup> OPEC (2005). OPEC's share of World Crude Oil Reserves, available from <http://www.opec.org/home/PowerPoint/Reserves/OPEC%20share.htm>, 15.05.07



Hence, the IOCs lost much of their direct access to resources, and consequently, the power shifted to the oil-producing countries and their national oil companies. Moreover, the competitive structure of the industry changed with the threat of new competition from emerging markets such as China and India. Today, 84 percent of the resource base is in the hands of the national companies and governments and only 16 percent are available to IOCs<sup>15</sup>. Still, NOCs have for years turned to IOCs for capital, expertise and technology by entering into production sharing agreements (PSA) with the international oil companies. However, this is today also changing as the NOCs have accumulated large cash deposits and invest heavily in technology development themselves. Hence for the future, it is expected that the IOCs will have to develop new business models to work in partnership with NOCs<sup>16</sup>.

Nevertheless, due to the increasing competition and change in the power structure, the oil and gas industry has in recent years experienced a wave of mergers and acquisitions. Most of the initial M&As within the industry were horizontal mergers among the majors; such as Exxon and Mobile, BP and Amoco and Chevron and Texaco. The main motive behind these mergers was the need to reduce costs and remain profitable in times of low oil prices by restructuring their upstream production and refining activities<sup>17</sup>. As the oil prices recovered however, the mergers continued, but more emphasis was put on benefiting from other types of synergy effects such as combining complementary assets and increasing market power. However, in the past few years, there has been an increase in the number of vertical mergers, involving deals of the upstream production of oil such as ConocoPhillips purchase of Burlington reserves and ChevronTexaco's acquisition of Uncoal<sup>18</sup>. The main drivers behind these were industry cost inflation, maturing fields and increased expenditures on health and safety. Nonetheless, as the power balance is expected to shift further in favour of NOCs over the coming decade, the main motive behind mergers today are securing access to scarce resources. Also, gaining the required size and financial strength to take on larger-scale projects that can offer sufficient returns have become a critical success factor in the industry today<sup>19</sup>.

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<sup>15</sup> Nunn, D. Senior Vice President, Portfolio Strategy, Norsk Hydro. Personal interview, 20.05.07.

<sup>16</sup> Huseyinov, T. (2005). *Global Politician Oil Wars: US Companies against China, Russia and India*, available at <<http://www.globalpolitician.com/articleshow.asp?ID=1480&cid=7>>, 18.06.07

<sup>17</sup> Nuebecker, L. and Stadler, M. (2003). *In Hunt for Size-Merger Formation in the Oil Industry*, in Kolodziej A. and Wojchich, N. (2006). *M&A as a way to create value-case of Norsk Hydro ASA*, Master thesis, NHH.

<sup>18</sup> Sweeney, P. (2006). *M&A looks Hot, Energy Hotter Still*, Financial Executive, in Kolodziej A. and Wojchich, N. (2006). *M&A as a way to create value-case of Norsk Hydro ASA*, Master thesis, NHH.

<sup>19</sup> Toal, B. A. (1999). *'The Land of Giants'*. *Oil and Gas Investor*; in Hosaka, S. (2004) "Japanese Business Strategy in the International Oil Industry". The Florida State University.

# PART 4: THEORY AND FRAMEWORKS

## CHAPTER 1: INTRODUCTION

There are both external and internal inducements for a firm to pursue internationalisation. The external inducements are related to forces in a firm's external environment, which can lead to new growth opportunities, but can also come in the form of threats. New opportunities arise as firms can exploit differences between countries and geographical regions and achieve economies of scale in broadening the size of the markets they serve. Another benefit could be the stabilisation of earnings across markets as economic growth cycles fluctuate between countries. A threat, on the other hand, could be a new competitor on the market weakening the position of the existing firm. Consequently, these external inducements can lead to expansion that is either offensive or defensive in nature. The internal inducements on the other hand are conditions within the firm itself, which encourage internationalisation. Most often, internal inducements arise from a firm's desire to better exploit and employ its resources and competences. However, a firm's resources and competences might not match the needs and requirements of the market. It is important with a match between the firm's resources and competences and the markets to enhance the competitive advantage of a firm<sup>20</sup>.

The mix of internal and external inducements and obstacles a firm faces will influence whether a firm chooses to expand into international markets, and how the possible expansion will take place. A firm that wants to exploit an attractive international growth opportunity, but lacks the sufficient resources and capabilities to do so may proceed through a strategic alliance, or a merger and acquisition. On the other hand a firm may choose to address an external threat by leveraging its resources and capabilities on its own and expand through internal development. Eventually, it is the combination of external and internal inducements which influence the firm's internationalisation decision and provide the basis for its success<sup>21</sup>.

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<sup>20</sup> Penrose, E. (1959). *The Theory of the Growth of the Firm*, London: Basil Blackwell in Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>21</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

Consequently, it is crucial to have a strong understanding of both the external and internal environment of a firm. As illustrated in the figure below, the internal environment, or the micro-environment consists of the labour, capital, materials and equipment used in an organisation. The external environment on the other hand is often referred to as the macro-environment, and includes the customers, suppliers, and competitors and other institutions and environmental forces that have an impact on the company’s ability to achieve its objectives<sup>22</sup>. By matching the internal strengths and weaknesses of a firm with the external market opportunities and threats, the company is able to create a competitive advantage<sup>23</sup>.

Figure 5: The business environment of a firm<sup>24</sup>



<sup>22</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>23</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2nd edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>24</sup> Management Modern, Business Environment, available at <[http://telecollege.dcccd.edu/mgmt1374/book\\_contents/1overview/business\\_environment/bus\\_envior.htm](http://telecollege.dcccd.edu/mgmt1374/book_contents/1overview/business_environment/bus_envior.htm)>,12.06.07

## CHAPTER 2: THE PESTEL FRAMEWORK

This section aims to analyse the external environment of a firm by applying the PESTEL framework. This model divides the macro-environmental forces into the following six categories: political, economic, social, technological, environmental and legal. The framework seeks to evaluate how these external forces affect the firm. Furthermore, it assists companies in the selection of attractive markets and the appropriate entry mode. Hence, countries are often compared along the dimensions that are identified in the PESTEL framework before the industry-specific conditions are evaluated. As the macro-environmental forces changes over time, it is important to understand the key drivers of change and the impact they have on particular industries, markets and companies. The key drivers of change will be different according to various industries and also vary from nation to nation. Hence, this framework should be used to analyse the current and future impact of environmental factors, which may be different from their past impact. Moreover, when there are high levels of uncertainty about future changes in the environment, evaluating different scenarios may be a useful approach. It can sometimes be hard to differentiate under which category a force belongs. Thus, the main emphasis should be put on the forces that are most likely to be the drivers of change and that have the most severe impact on the external environment of a company<sup>25</sup>.

### POLITICAL ENVIRONMENT

The political environment in which a firm operates has a major impact on its operations and profitability, and is mainly influenced by the political forces in an industry or country. The political forces refer to political trends, governmental policies and interventions, and political risks<sup>26</sup>. Governmental policies and regulations on taxation and foreign trade affect companies by offering incentives for foreign investments or on the other hand, disincentives to engage in foreign production<sup>27</sup>. Other governmental interventions in the market are most likely to occur in areas that affects certain political objectives such as employment, regional development,

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<sup>25</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>26</sup> O'Connor, D. (2000). *Business planning*. Broadstairs, UK: Scitech Educational., available at <<http://site.ebrary.com/lib/jonhh/Doc?id=10040407>>, 05.04.07.

<sup>27</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

access to national resources, and culture<sup>28</sup>. Also, the political stability and type of government are political factors that determine the attractiveness of a particular market. Hence, the choice of entry mode is dependent on whether the foreign market's economy is a market economy or a centrally planned socialist economy<sup>29</sup>. Political and social events that can have an impact on the security and profitability of a firm are considered to be political risks. It is important that a firm is aware of the degree of political risks in a country before entering. Key types of political risks include<sup>30</sup>:

- Sovereign risks which arise from the policies and decisions of host governments, including changes in tax laws, restrictions on expatriate employment and regulations on foreign trade.
- The lack of consistent legislation and effective polices, which can lead to corruption and contractual and financial difficulties for companies in operation.
- International risks that are linked to developments in the international political economy.
- Security risks relating to wars, civil unrest, violence and crime, diplomatic relations, trade treaties and economic sanctions.

## ECONOMIC ENVIRONMENT

The economic environment both at the local and international level has a significant impact on a company's activities in the market place and the size of a potential market. Examples of economic forces are currency rates, raw material prices, interest rates, and inflation rates<sup>31</sup>. The fluctuation of a country's currency, interest and inflations rates can considerably affect a company's revenues<sup>32</sup>. Moreover, GDP figures, unemployment rates, labour cost, stock market values and business cycles are other examples of economical forces<sup>33</sup>. The size of the economy measured in terms of its gross domestic product per capita (GDP), is an important determinant

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<sup>28</sup> Porter, M. E. (1998). *Competitive strategy: techniques for analyzing industries and competitors* : with a new introduction, New York: Free Press.

<sup>29</sup> Root, R. (1998) *Entry Strategies for International Markets – revised and expanded*, San Francisco, US: Jossey-Bass.

<sup>30</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>31</sup> Mind Tools, *PEST analysis*, available at <[http://www.mindtools.com/pages/article/newTMC\\_09.htm](http://www.mindtools.com/pages/article/newTMC_09.htm)>, 15.04.07.

<sup>32</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>33</sup> O'Connor, D. (2000). *Business planning*. Broadstairs, UK: Scitech Educational., available at <<http://site.ebrary.com/lib/jonhh/Doc?id=10040407>>, 05.04.07

when firms calculate the potential size of a market. Moreover, the GDP of a country also influence the choice of entry mode, as smaller market favours entry modes that need low sales volumes to break-even and demands a low degree of control. This is also the case when a company is only focusing on a smaller segment of a larger market<sup>34</sup>. Another economic factor to consider is the population's disposable income as it influences a firm's strategic decisions on whether or not the potential customers will have the purchasing power to buy the firm's product offerings<sup>35</sup>. Moreover, in order to successfully compete on the local market, it is important to establish good relationships with local distribution channels and suppliers. This is particularly important, when the total sales are too low to justify a separate distribution channel. Other issues to consider for a company going global are the need for local sales people and services, adjustment of prices and products to fit local needs, as well as transportation time and costs. Transportation costs can be very high if the product needs to be delivered in a short time or if the product is of great value and requires special delivery methods<sup>36</sup>.

## SOCIAL ENVIRONMENT

Social forces can be defined as the ways in which businesses are influenced by changes in society. Hence, most social forces can also be classified either as political or economical, but mostly relate to the cultural forces of an environment. An important social force is the cultural distance between the home and host country of a firm and refers to the differences in cultural norms, values, language, and religion. This will affect whether a firm will enter a particular market and also how they will enter<sup>37</sup>. The impacts of cultural forces have previously been vastly underestimated, however more and more firms understand the importance of considering cultural differences when operating in foreign markets. Moreover, changes in the population demographics, income distribution, lifestyle changes, levels of education and gender equality are other examples of social forces<sup>38</sup>. Demographic changes such as the ageing of the baby boomers affect companies to a great extent, by reducing their working

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<sup>34</sup> Root, R. (1998). *Entry Strategies for International Markets* – revised and expanded, San Francisco, US: Jossey-Bass.

<sup>35</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>36</sup> Porter, M. E. (1998). *Competitive strategy: techniques for analyzing industries and competitors: with a new introduction*, New York: Free Press.

<sup>37</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>38</sup> Mind Tools, *PEST analysis*, available at <[http://www.mindtools.com/pages/article/newTMC\\_09.htm](http://www.mindtools.com/pages/article/newTMC_09.htm)>, 15.04.07

population. Moreover due to changes in lifestyles and differences in consumer preferences across countries, companies might have to adapt their products and services accordingly<sup>39</sup>.

## TECHNOLOGICAL ENVIRONMENT

The infrastructure of national markets will also be an important factor in assessing the attractiveness of markets. Infrastructure refers to the availability of roads, electricity, telecommunications, railroads, water supply, and so on. The availability of roads and railroads for instance, determines the choice of entry mode, as high transportation costs make it difficult for exported products to compete with the local products. This is especially the case for exporting companies with large geographical distances between the two countries in trade. Infrastructure is mainly funded through governmental investments; however, there is today an increasing trend towards privatisation of infrastructure throughout the world. Existing infrastructure is generally better in industrial developed countries like Norway, the United States, and Japan in comparison to developing countries<sup>40</sup>. Generally, national markets with good existing infrastructure are more attractive for firms. Moreover, the availability of necessary local resources such as appropriately skilled labour and technology are key factors in deciding what markets to enter and entry modes to pursue. The availability of new and emerging technology depends on governments' spending on R&D and focus on technological efforts<sup>41</sup>.

## ENVIRONMENTAL ENVIRONMENT

Environmental issues refer to the matters related to environmental protection laws, waste disposal, energy consumption and emission of greenhouses gases. In recent years environmental governance has become increasingly important and huge resources are put in place to ensure effective and efficient environmental control. More and more companies adapt environmentally friendly practises and try to act in a manner which is sustainable for the environment. This applies however mainly to producing companies. Moreover, customers are

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<sup>39</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>40</sup> Kessides, I. (2004). *Reforming Infrastructure : Privatization, Regulation, and Competition*. Washington, USA: Oxford University Press. available at <<http://site.ebrary.com/lib/jonhh/Doc?id=10056608>>, 15.04.07.

<sup>41</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

demanding that companies use environmentally friendly packaging and invest in energy saving transportation methods. Consequently, it is important for a firm to consider the governmental regulations concerning environmental issues before entering a new market<sup>42</sup>.

## LEGAL ENVIRONMENT

Legal forces refer to governmental regulations and policies that affect the entry of foreign companies. Examples of legal forces can be restrictive import policies such as tariffs, quotas and other trade barriers. The purpose of tariffs is to protect a country's own production from foreign companies by making the foreign products more expensive. Quotas, on the other hand, are restrictions in quantities of a certain product that are allowed to be exported to a country and this puts a limit on the amount of products a firm can sell abroad<sup>43</sup>. Hence, these barriers to trade are important factors in a firm's decision on whether to produce locally or to export. Furthermore, a company entering a foreign market has to consider the local competition law, the employment law, consumer protection laws as well as environmental laws and health and safety restrictions. Local competition laws can obstruct the entry of companies with monopoly power, or prevent anti-competitive behaviour among existing companies. Moreover, employment laws can favour the employment of local workers, and consumer protection laws can force companies to modify their product according to the local markets<sup>44</sup>.

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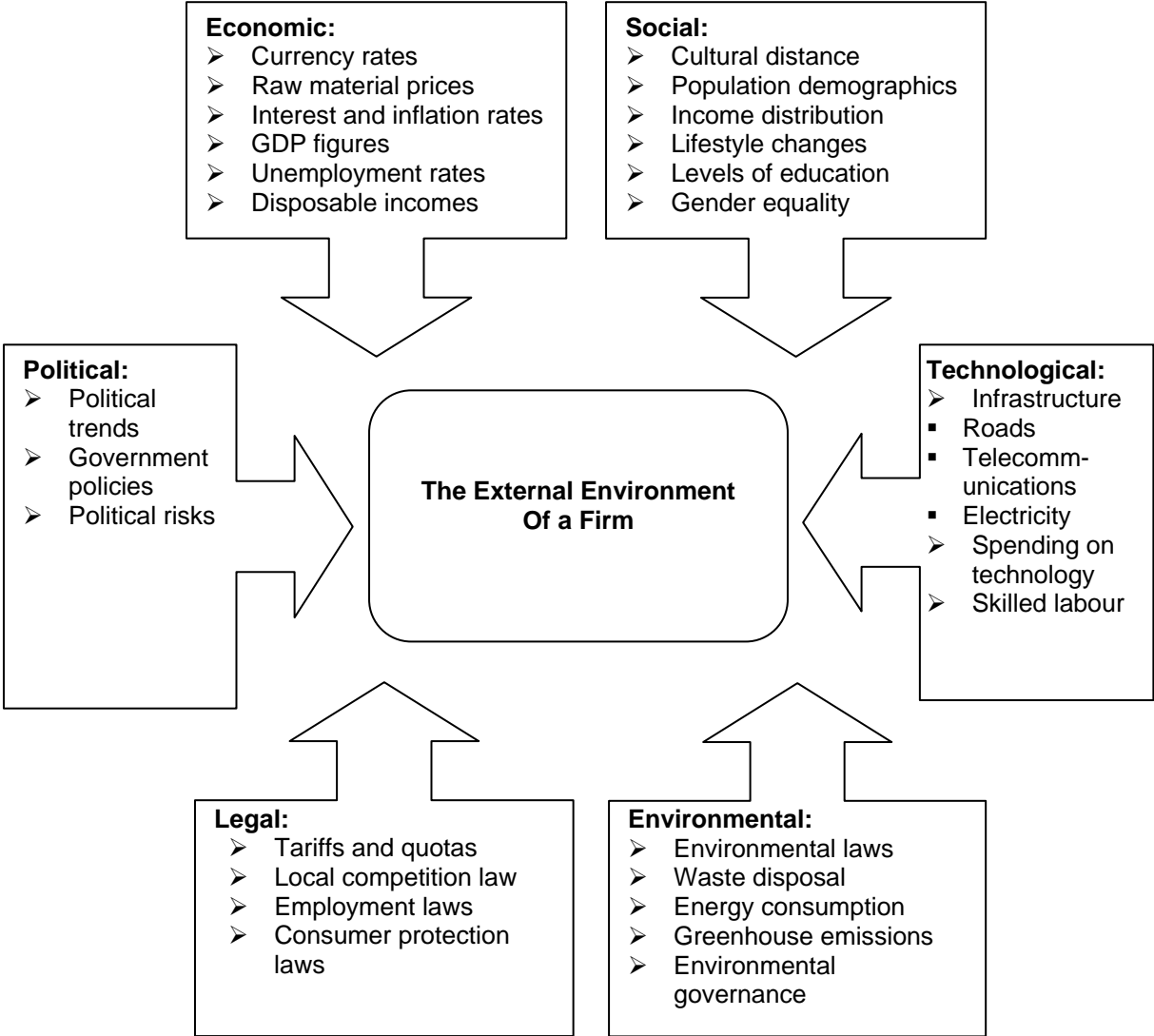
<sup>42</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>43</sup> Porter, M. E. (1998). *Competitive strategy: techniques for analyzing industries and competitors* : with a new introduction, New York: Free Press.

<sup>44</sup> Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.



**Figure 6: Forces influencing the external environment of a firm**

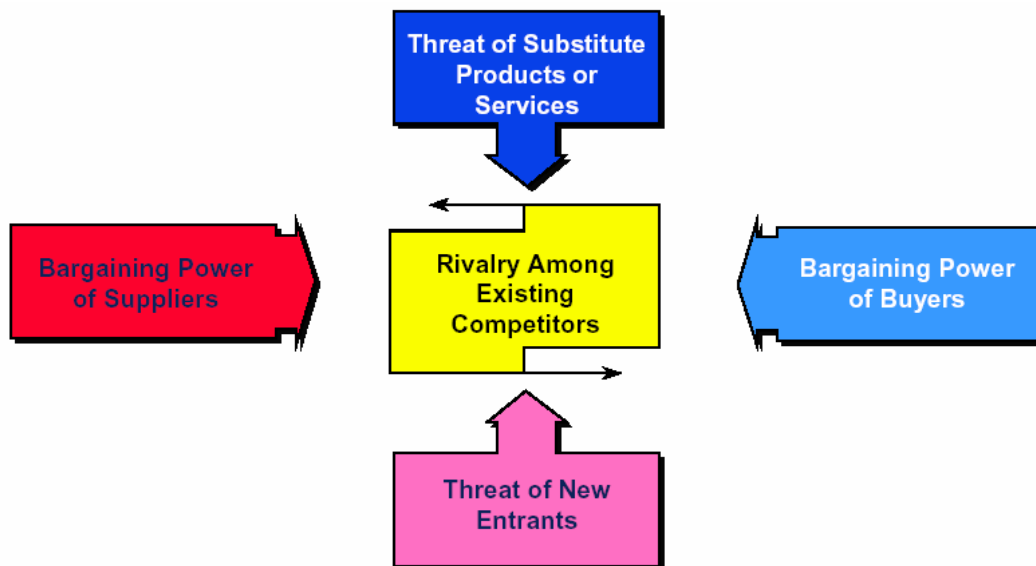


The PESTEL framework is a useful tool for evaluating the external environment of a firm and to see how the forces influence the decisions and performances of firms. Nonetheless, given the vast number and range of external forces, and the pace at which they change, it is almost impossible for a firm to get a whole picture of its external environment. Even when put into a systematic framework like PESTEL, such extensive environmental analysis is likely to be very costly and time consuming. Hence, it might be necessary to also evaluate a firm’s environment from an industry-based view to get a more accurate and realistic picture.

## CHAPTER 3: PORTER'S FIVE FORCES FRAMEWORK

After having analysed how the external forces affect the business environment of a firm, the next step is to look at the industry environment, which is formed by a firm's relationships with its customers, suppliers and competitors. In order to determine the competitive structure and the profitability potential of an industry, the widely used and influential analytical framework Porter's Five Forces will be helpful. According to this model the competitive structure of an industry is shaped by the interplay of five forces: threat of new entrants, threat of substitutes, bargaining power of buyers, bargaining power of suppliers and rivalry among existing competitors<sup>45</sup>.

**Figure 7: Porter's five forces**



Together, the strength of these forces determine the profitability of an industry, and hence its attractiveness. Consequently, stronger forces are associated with a more challenging business environment. Moreover, this framework identifies the relevant industry opportunities and threats, which enables firms to match these with their resources and capabilities, and hence gain a competitive advantage. The strength of each of the five competitive forces is again determined by a number of variables, which will be discussed further in the following sections<sup>46</sup>.

<sup>45</sup> Porter, M. E., (1998). *Competitive Strategy: Techniques for analysing industries and Competitors*, Free press, New York.

<sup>46</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

## THREAT OF NEW ENTRANTS

The threat of new entrants is the risk that new firms will enter the industry. New entrants are motivated to enter attractive industries where returns on capital exceed its cost of capital. Their presence may force down prices and put pressure on profits as they bring in new production capacity. Analysing the threat of new entrants involves determining the barriers to entry and the expected competitive reactions from the current industry participants<sup>47</sup>.

Barriers to entry refer to the costs and other requirements needed to enter the market, which protects the incumbent companies. In addition, the established companies may react with competitive tactics such as price wars and collusions in order to prevent entry from the new entrants. Entry barriers are unique to each industry and can take on a variety of forms. The most common entry barrier is the degree to which incumbent firms enjoy economies of scale, which refers to the reduced unit costs by increasing the quantity of production. New entrants are not likely to be able to match the costs of existing firms; hence they cannot compete with the prices in the industry. Often, there are also large initial capital requirements in physical facilities, production equipment and inventories which may deter entry of new competitors. Moreover, if the incumbent firms have well-established brand names and are able to differentiate their products, this might increase the customer loyalty. Consequently, it will be extremely difficult for new entrants to capture market shares. Similarly, if switching costs are high, a new entrant must either offer a higher quality product or considerably lower prices on its product to attract customers<sup>48</sup>. Other entry barriers are the existence of patents protecting a firm's technology and processes. Likewise, the know-how in developing new products and services are embedded knowledge which firms have accumulated over time and is extremely difficult for newcomers to duplicate. Finally, incumbent firms often enjoy favourable access to inputs and distribution channels which may be difficult for new companies to obtain<sup>49</sup>.

## THREAT OF SUBSTITUTES

Substitutes are products that can fulfil a similar need and perform the same function as the products or services in the industry. Consequently, the size of the threat will contribute in

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<sup>47</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>48</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2nd edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>49</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

determining the degree of rivalry in an industry. The presence of substitute products can lower the attractiveness and profitability of an industry, as it is more difficult for incumbent firms to raise prices if there are available substitutes. There are two main determinants which decide whether there is a threat of substitutes in an industry. The first determinant looks at the performance of the alternative products in the industry. A substitute will be a threat if its quality and function is superior to existing products. Secondly, substitutes pose a threat if the switching costs are low, as it will make it easier for customers to replace the existing product. However, in some cases, customers may be reluctant to switching to another product if they are accustomed to using a specific product in a certain way. Overall, the threat of substitutes makes it necessary for firms to look at the external environment outside of the focal industry. This may lead firms to enhance customer value and loyalty by offering higher quality products and services at lower prices to reduce the attractiveness of substitutes<sup>50</sup>.

## BARGAINING POWER OF BUYERS

Buyers are the customers of the industry. They are responsible for the demand and have the potential to put downward pressure on prices. The prices in an industry are determined by the interaction of seller and buyer and which of the two parties that are able to capture the most value, depends on their relative bargaining power. Whether or not the buyer is able to squeeze the supplier's margins depends on its relative bargaining power. Thus, strong bargaining power of buyers will lead to more intensive rivalry in the market. Conversely, if the buyers have weak bargaining power, the suppliers of industry are in the position to negotiate good deals and terms. The bargaining power of buyers is enhanced if there are few dominant buyers and many sellers in an industry, and they purchase a large portion of the total industry output. Hence, the buyer becomes a very important customer that the suppliers cannot afford to lose. Moreover, buyers can increase their bargaining power if products are standardised and undifferentiated or do not add value, as it enables them to easily switch suppliers. Besides, if buyers have full information on prices, they can use this to their advantage. Lastly, buyers can use their bargaining power by threatening to vertically integrate backwards into the supplier's industry<sup>51</sup>.

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<sup>50</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>51</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

## BARGAINING POWER OF SUPPLIERS

Suppliers are the businesses that provide the labour, raw materials, equipment, transportation and financial services to firms in the industry. The cost of these inputs can have a significant effect on the company's profitability. Suppliers can use their bargaining power over participants in an industry by raising prices or reducing quality of goods and services. Thus, powerful suppliers can therefore reduce the profitability of an industry where the firms themselves are unable to recover the costs, by increases in its own prices. Hence, the stronger the bargaining power of suppliers the more intense rivalry in an industry. Conversely, if the bargaining power of the suppliers is weak then the firm might be in the position to negotiate favourable terms. Generally, the suppliers are powerful if the industry is dominated by few large suppliers, and there are many buyers. Furthermore, if suppliers provide unique, differentiated and highly valued products or services, and the focal firm is not a key customer, they can exert strong bargain power over buyers. Moreover, if suppliers have created high switching costs of their products and services they can enhance their bargaining power. Finally, suppliers are powerful if they are able to vertically integrate forward and become a rival of the focal firms in the industry, in addition to being a supplier<sup>52</sup>.

## DEGREE OF RIVALRY

Rivalry among competitors is usually the strongest of the five forces. The degree of rivalry varies from industry to industry, however companies in every industry producing the same or similar goods compete against each other. Consequently, they strive to gain sustainable competitive advantages to increase their competitiveness. Because companies within an industry are mutually dependent, the actions taken by one competitor are likely to have an effect on the other players in the market, which often leads to competitive retaliation. Moreover, intense rivalry is often indicated by price wars, high rates of innovation, and expensive marketing. All these actions are taken by firms trying to increase their market share and profitability<sup>53</sup>.

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<sup>52</sup>Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>53</sup>Porter, M. E. (1998). *Competitive strategy: techniques for analyzing industries and competitors: with a new introduction*, New York: Free Press.

There are many structural determinants of the degree of rivalry. Firstly, the number and relative size of competitors affect the intensity of the rivalry. The more firms of equal size competing in a market, the more pressure to keep prices low. Conversely, if the industry is dominated by a single firm or a small group of leading firms, price competition may be restrained and limit the degree of rivalry. Another determinant is the growth potential of the industry. In high growth industries, firms try to use their resources effectively to serve a large market, rather than trying to steal customers from their competitors. However, slow industry growth rates encourage firms to engage in price competition to maintain their market shares. Moreover, high levels of fixed costs in an industry can also lead to increased rivalry as firms try to maximise their productive capacity to achieve economies of scale. Hence, this creates excess capacity in an industry, and as a result firms are forced to cut prices to reduce inventories. Moreover, high exit barriers due to the large capital investments in specialised equipment and the protection of employees may lead firms to continue operating in an industry with low profits. Additionally, the rivalry intensifies when there is low degree of product differentiation, and there are low switching costs. The diversity of competitors can also affect the degree of rivalry in an industry as competitors that sharply differ in their objectives, usually compete more aggressively to defend their position<sup>54</sup>.

Porter's five forces framework is limited by its static nature as it views the industry structure as constant and externally determined. The model assumes that the level of competition is driven by the industry structure and that companies are constrained by it. In reality, however, competition is a dynamic process and firms can continuously change the industry structure through creating new technologies, substitute products and distribution channels or engage in collusive behaviour<sup>55</sup>.

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<sup>54</sup> Hitt M., Ireland D., and Hoskisson R., (2005). *Strategic management: Competitiveness and Globalisation*, 6th edition. Mason, Ohio : Thomson/South-Western.

<sup>55</sup> Sudarsanam S. (2003). *Creating Value from Merger and Acquisitions- The Challenges*, Prentice Hall-Financial Times.

# CHAPTER 4: DUNNING'S OLI PARADIGM

## THE EVOLUTION OF THE THEORY

The core theory in the area of international business deals with the analysis of the multinational enterprise (MNE). The conceptual framework most often used when attempting to explain the extent and pattern of foreign investment is referred to as the OLI paradigm, originally proposed by John Dunning in 1977. It was originally seen as a theory, combining different types of economic theories of international production. However, in the late 1980s Dunning adopted the term “eclectic paradigm” and proposed that other theories were partial explanations for internal production focusing on particular issues. The OLI paradigm on the other hand seeks to look at the broader picture. It explains why there is international production, where the production would take place and how and why multinational firms can earn better profits than national producers<sup>56</sup>.

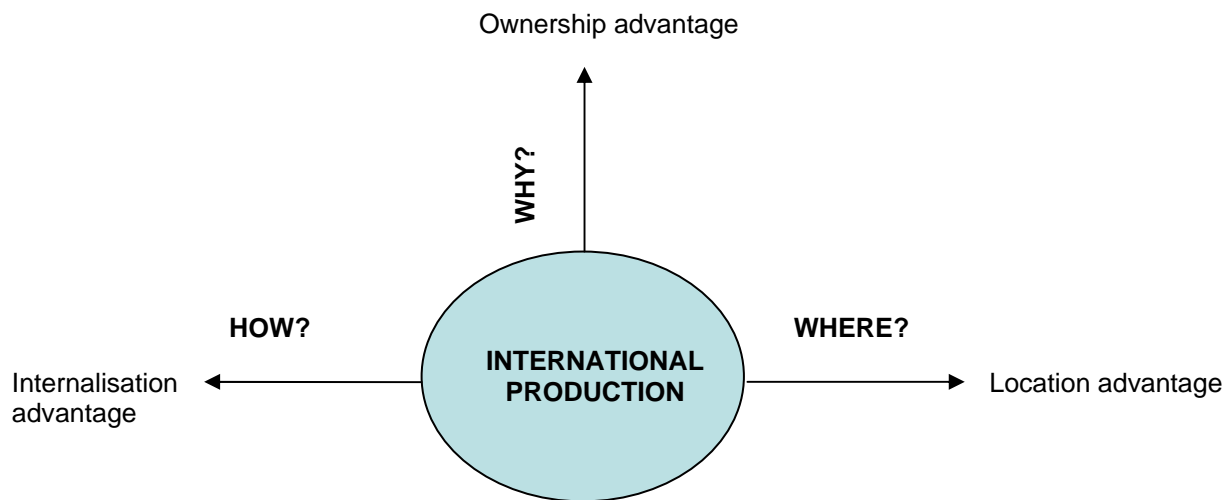
The OLI framework suggests that three conditions need to present in order for a firm to undertake foreign direct investment; namely ownership advantage, location advantage and internalisation advantage. It is the organization of these sets of conditions that either encourage or discourage a firm from undertaking foreign activities and becoming an MNE, instead of pursuing an alternative route. According to Dunning, a firm that consists of ownership advantages, but has no internalisation or locational advantages will be better off by licensing its international production. Further, firms that have both ownership and internalisation advantages, should not engage in foreign production if there are no advantages of being localised in the particular country, but rather serve the foreign markets through exports. Only those firms that can achieve ownership, internalisation and locational advantages should engage in foreign direct investment<sup>57</sup>.

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<sup>56</sup> Dunning, J. H., (1988). The eclectic paradigm of international production: A restatement and some possible extensions, *Journal of International Business Studies*, Vol. 19, No. 1, (Spring, 1988), pp. 1-31.

<sup>57</sup> Minde, N., (2000). *Dunning's eclectic paradigm applied on Jotun in Thailand*, SNF Report No. 64/00, SIØS Centre for International Economic and Shipping.

**Figure 8: Conditions to undertake FDI**



## OWNERSHIP ADVANTAGE

The ownership advantage addresses why firms want to go abroad and may arise either from the firm's privileged ownership of or access to a set of income-generating assets<sup>58</sup>. Such advantages are the main asset for most firms and are often referred to as firm-specific advantages. This is because they provide firms with a market position or cost advantage, specific to that firm which can benefit them relative to competitors. Hence, it is of major importance to develop and protect these advantages as competitors might try to copy them<sup>59</sup>. Moreover, as there are higher costs associated with operating in a foreign location, a company can use its firm-specific advantages to offset this, either by generating higher revenues and/or lower their costs. The added costs of operating abroad occur due to the differences in culture, institutions, and language between the home and host country. Moreover there are increased costs relating to communication and transportation when operating at a distance<sup>60</sup>.

There are, according to Dunning, three types of ownership-specific advantages: standard ownership advantages, benefits derived from belonging to a large organization and benefits of

<sup>58</sup> Cantwell, J. and Narual, R. (2003). *International Business and the Eclectic Paradigm. Developing the OLI framework*, Routledge Studies in International Business and the World Economy.

<sup>59</sup> Dunning, J. (1980). Toward an eclectic theory of international production: Some empirical tests, *Journal of International Business Studies*, Vol. 11, No. 1 (Spring - Summer, 1980), pp. 9-31.

<sup>60</sup> Griffin, R. W. and Pustay M. W. (2005). *International Business: A managerial perspective*, 4<sup>th</sup> edition, New Jersey: Pearson Prentice Hall-Pearson Education International.



being a multinational enterprise<sup>61</sup>. Moreover, the eclectic paradigm states that the significance of each of these advantages and the configuration between them is likely to be context specific. Thus, they will probably vary across firms, industries, countries and regions<sup>62</sup>.

#### The standard ownership advantages

The standard ownership advantage refers to benefits a firm may have compared to other firms in specific locations. These advantages are mainly related to the size and position of the established firm, which in some cases imply monopoly power. Furthermore, product diversification and exclusive access to technology, patents and certain markets as well as the use of input factors like labour, finance, information and natural resources are examples of other standard ownership advantages<sup>63</sup>. An ownership advantage could also be something intangible, like a trademark, reputation, human capital or know-how. In general, MNEs are associated with a higher ratio of intangible assets than other firms. This can be explained by the fact that such intangible assets are often embedded in a firm and can more easily and less costly be transferred among affiliates of a single firm rather than between different firms<sup>64</sup>.

#### Benefits of belonging to a large organization

The benefits derived from belonging to a large organization are mainly economies of scale in production, purchasing, and marketing. Other benefits involve access to cheaper input factors like human capital, raw materials, equipment and capital. Moreover, a large organisation will typically possess more financial resources that can be invested in R&D to follow up the pace of technological development<sup>65</sup>.

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<sup>61</sup> Schjelderup, G. (1999). *Strategic Choices in a Global Environment: The Behaviour of the Multinational Firm*, NHH in Minde, N., (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, *SNF Report No. 64/00*, SIØS Centre for International Economic and Shipping.

<sup>62</sup> Cantwell, J. and Narual, R. (2003). *International Business and the Eclectic Paradigm. Developing the OLI framework*, Routledge Studies in International Business and the World Economy

<sup>63</sup> Minde, N. (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, *SNF Report No. 64/00*, SIØS Centre for International Economic and Shipping.

<sup>64</sup> Markusen, J. R. (1995). The Boundaries of Multinational Enterprises and the Theory of International Trade. *Journal of Economic Perspectives*-Volume 9, No. 2, (Spring 1995), pp. 169-189.

<sup>65</sup> Minde, N. (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, *SNF Report No. 64/00*, SIØS Centre for International Economic and Shipping.

## Benefits of being an MNE

A multinational company is also in a better position to take advantage of different factor endowments and factor prices. The MNE can use their expertise from the domestic market in managing production, sales and marketing to get access to new markets. There are certain industries where there are more multinational companies than others. These industries are often characterized by knowledge-based companies with high marketing costs and product differentiation. As such resources are mainly based on the embedded knowledge within a firm; it is easier and more efficient to transfer knowledge from a parent company to its affiliates than capital goods. Moreover, the parent company can also obtain knowledge about local conditions from their international affiliates. Another advantage derived from being multinational is the possibility to exploit tax differences between the various countries. An MNE can to a certain extent canalize surpluses from high-tax countries to low-tax countries, to reduce the total taxes paid. Further, multinational companies will be able to diversify its investments geographically in order to spread risk<sup>66</sup>.

## LOCATION ADVANTAGE

Location advantage refers to where a company will locate its international production. This implies that there must be an incentive for a firm to engage in foreign production rather than producing at home and then exporting to the foreign markets. A multinational firm will typically engage in foreign production when they find it in their best interest to combine their ownership advantages and certain internalisation gains with production in another country. An MNE decides where to locate its foreign operations by comparing each country's attractiveness according to country specific advantages such as; economic, socio-cultural, and political factors. However, firms need to take into consideration that these external factors change over time and must adapt accordingly<sup>67</sup>.

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<sup>66</sup> Schjelderup, G. (1999). *Strategic Choices in a Global Environment: The Behaviour of the Multinational Firm*, NHH in Minde, N., (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, SNF Report No. 64/00, SIØS Centre for International Economic and Shipping.

<sup>67</sup> Markusen, J. R. (1995). The Boundaries of Multinational Enterprises and the Theory of International Trade. *Journal of Economic Perspectives*-Volume 9, No. 2, (Spring 1995), pp. 169-189.

## Economic factors

The main economic factors relates the quantities and qualities of the factors of production, size and scope of the market, costs of transport and telecommunications, access to skilled labour, taxes and the existence of barriers to trade. Through access to abundant and cheaper factors of production the MNE can increase efficiency, achieve economies of scale and earn higher profits. The location advantages can also originate from greater proximity to final markets. In many industries where there are high production volumes, transportation costs are of importance. The goods typically have to be produced by people with specific skills with specially designed production equipment. Thus, firms that have high transportation costs will typically try to locate close to their markets. These goods are usually not very capital intensive in terms of advanced technology and well-educated labour. Hence, in more knowledge and technology-based industries, transportation costs are of less relevance<sup>68</sup>.

## Socio-cultural factors

Socio-cultural factors refer to the geographical distance between the home and host country as well as the cultural distance. This implies that the firm must take into consideration the differences in language, culture, and institutions before establishing in a foreign market. It is very important that firms obtain knowledge about the foreign markets before they enter so that they can adapt their product offering to fit the local needs, and become familiar with local business customs. Moreover, in countries which lack consistent and efficient legislation, it is extremely important for the firms to act in a socially responsible manner.

## Political factors

Political factors relate to the government policies that affect inward FDI flows, international production, and intra-firm trade. These include governmental intervention, taxation policies, trade barriers, and political stability. Many countries try to attract foreign investment by creating incentives through favourable taxes and tariffs. The main reasons for governments to

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<sup>68</sup> Dunning, J. H. (1985). International production and the multinational enterprise, *Journal of International Business Studies*, Vol. 16, No. 1 (Spring 1985), pp. 171-173.

attract FDI are the spillover effects from transferring resources and technology to the host country. Firms are also attracted to countries with low taxes on income, given that such policies are stable. Moreover tariffs may play an important role, but the effects of tariff policies might have two sides. Firstly, as high import tariffs make it expensive for foreign firms to supply a market through exports, they are motivated to engage in direct investment. On the other hand, having production in a high tariff country can lead to high production costs if the raw materials and inputs have to be imported at high prices<sup>69</sup>.

Moreover, certain locations simply possess geographical features that are difficult for others to match such as a large endowment of natural resources. Additionally, location-specific advantages can arise from clustering of economic activities, in which firms can take advantage from knowledge spillovers among closely located firms and a pool of specialised suppliers and buyers located in the region.

The choice of where a firm should locate its foreign investment location depends on a complex calculation that includes economic, socio-cultural and political factors. A typical example of an attractive market for a multinational enterprise would be a growing, high income market, with low production costs, and good access to factors scarce in the home country. Moreover, the country should be politically stable, have an attractive investment climate and be culturally and geographically close to the home country<sup>70</sup>.

## INTERNALISATION

The internalisation gains are related to how activities organised within a firm can be more effectively managed than if coordinated through the market. When choosing how to penetrate a new market, a firm has several entry mode options ranging from exporting to wholly owned subsidiaries. Although a firm may enjoy an ownership advantage in a production process, and prefer to produce abroad due to favourable taxation policies and lower input costs, it is still not obvious that a firm should set up a foreign subsidiary. An alternative would be to engage in a licensing agreement with a foreign firm in the host country.

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<sup>69</sup> Minde, N. (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, *SNF Report No. 64/00*, SIØS Centre for International Economic and Shipping.

<sup>70</sup> Griffin, R. W. and Pustay M. W. (2005). *International Business: A managerial perspective*, 4<sup>th</sup> edition, New Jersey: Pearson Prentice Hall-Pearson Education International.

Generally, an MNE will choose to internalise when it is beneficial for them to exploit their advantages internally rather than through transactions in the market. This will be dependent on the specific characteristics of the assets being transferred and the costs of transferring it<sup>71</sup>. As mentioned earlier, knowledge-based assets such as patents, know-how and reputation can be used as a joint input in a number of activities across affiliates. Hence these assets are often easier and less costly to transfer within a firm rather than through the market. Furthermore, due to the non-excludability of such knowledge-based assets, a firm may not want to share these assets with another firm, in fear of partner opportunism. We could also discuss other issues associated with licensing, and favouring internalising such as informational asymmetries and principal-agent problem<sup>72</sup>. Nonetheless, these theories are beyond the scope of this thesis. As a rule however, if other firms can easily get access to the ownership advantage of a firm, the firms would be better off with licensing.

What is more is that a multinational company will, per definition, have value-adding activities in more than one location. This implies that there must be reasons, such as cost efficiencies, for these activities to be coordinated through one company rather than through the market. Furthermore, the OLI paradigm predicts that horizontally and vertically integrated firms should organise their activities internally rather than in the market, whenever external markets are nonexistent or imperfect. Hence, the internalization argument of the OLI paradigm explains why MNEs are integrated businesses, producing in several countries, and allowing them to ship goods, services and intangible assets among their affiliates<sup>73</sup>.

## CONCLUSION

Through the OLI paradigm, Dunning aims to explain why multinational enterprises engage in international production, by looking at the interaction between the three components ownership advantage, locational advantage and internalisation advantage. First of all, the ownership advantage implies that firms undertake foreign investments to exploit its firm-specific advantage in other markets, which again allows them to overcome the transaction

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<sup>71</sup> Griffin, R. W. and Pustay M. W. (2005). *International Business: A managerial perspective*, 4<sup>th</sup> edition, New Jersey: Pearson Prentice Hall-Pearson Education International.

<sup>72</sup> Markusen, J. R. (1995). The Boundaries of Multinational Enterprises and the Theory of International Trade, *Journal of Economic Perspectives*, Volume 9, No. 2, (Spring 1995), pp. 169-189.

<sup>73</sup> Dunning, J. H. (2001). *The eclectic (OLI) paradigm of international production: Past, present and future*. *International Journal of the Economics of Business*, Volume 8, No. 2, (July 2001), pp. 173-190.

costs associated with operating abroad. Secondly, the location advantage suggests that firms choose where to establish its international activities by evaluating the attractiveness of each location according to economic, socio-cultural and political factors. Finally, the internalisation advantage considers whether firms should internalise their activities within the firm or execute them on the market. A firm's choice of entry mode is dependent on the relative benefits and costs of each mode. To conclude, a firm that is able to simultaneously combine these ownership, location and internalisation advantages, should engage in foreign direct investment rather than undertaking other modes of entry in new markets<sup>74</sup>.

Since the OLI paradigm was originally introduced it has been challenged from many directions. The theory is in a general form, and has only limited ability to predict and explain particular kinds of international production and the behaviour of individual firms. Nevertheless, the OLI-paradigm still remains a useful general framework for explaining and analyzing the economic rationale for international production and the organizational issues related to the activities of an MNE<sup>75</sup>.

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<sup>74</sup> Griffin, R. W. and Pustay M. W. ( 2005). *International Business: A managerial perspective*, 4<sup>th</sup> edition, New Jersey: Pearson Prentice Hall-Pearson Education International.

<sup>75</sup> Minde, N. (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, *SNF Report No. 64/00*, SIØS Centre for International Economic and Shipping.

## CHAPTER 5: THE RESOURCE BASED VIEW

The resource-based view has emerged in response to the limitations of the industry-based view, and is today one of the three leading perspectives on strategy. While the industry-based view focuses on the degree of rivalry among firms within an industry, the resource based view addresses why firms are different and how firms can generate a sustainable competitive advantage. The industry-based view focuses on the external opportunities and threats, while the resource-based view concentrates on the internal strengths and weaknesses<sup>76</sup>. Nevertheless, the resource-based approach stresses the importance of analysing the external environment and the firm's competitive environment before evaluating which resources the firm currently possesses and which resources it lacks to achieve a sustainable competitive advantage.

The resource-based view suggests that firms differ in fundamental ways because each firm possesses a unique bundle of resources and competences. A resource can be anything which is considered to be a strength or weakness of a given firm which has the potential to generate competitive advantage<sup>77</sup>. Resources can be defined as the tangible and intangible assets firms use to implement its strategies. Tangible resources are assets that are observable and more easily quantified. Typically, an organisation's tangible resources can be divided into three broad categories<sup>78</sup>:

- Physical resources refer to the firm's plants, offices, equipment, geographical locations, and access to raw materials and distribution channels. The nature of these resources, such as the age, condition, capacity and location of each resource, will determine how useful they are.
- Financial resources are the capital, cash, debtors and creditors. The value of these resources is dependent on the ability to generate internal funds and raise external capital.
- Technological resources and capabilities are related to the skills and assets that generate innovative products and services supported by patents, trademarks, copyrights, and trade secrets.

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<sup>76</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>77</sup> Barney, J. (2001). Is the resource-based "View" a useful perspective for strategic management research? Yes. *Academy of Management Review*, 26: 41-56.

<sup>78</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

The intangible resources are per definition harder to observe and more difficult to quantify. Yet intangible resources are more likely than tangible resources to be a source of competitive advantage as it is internally developed over time and cannot easily be imitated. These resources can also be broken into three broad categories:

- Human resources refer to the people in an organisation and their skills and knowledge which are embedded in the firm. In knowledge-based economies people do genuinely become the most valuable asset.
- Intellectual capital is an important aspect of the intangible resource of an organisation. This includes patents, brands, business systems and customer databases. Intellectual capital is likely to be an important asset of many organisations.
- Reputational resources refer to a firm's capabilities to develop and leverage its reputation as a reliable provider of goods/services, an attractive employer, and a socially responsible corporate citizen. The value of this intangible resource is often referred to as "goodwill", when businesses are sold.

A firm also possesses organizational capabilities which are neither intangible nor tangible assets, but complex combinations of assets, people, processes and structures that firms utilize to transform inputs into outputs. Nonetheless, although the distinction between tangible and intangible resources might in some cases be unclear, it is usually the combination of both tangible and intangible capabilities that generates a competitive advantage. However, if all firms had identical bundles of resources, then all firms could pursue the same strategy, and hence the basis for competitive advantage would disappear<sup>79</sup>. Still, individual resources may not yield a competitive advantage. It is the activities and processes through which resources are deployed that generate competitive advantage. This is often referred to as the firm's core competences or capabilities which are difficult for other firms to copy or obtain<sup>80</sup>. The distinction between resources and competencies is important. Resources can be acquired in the market, while competencies are internally developed through the use of the acquired resources<sup>81</sup>. Even so, resources and competences will be used interchangeably in this paper.

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<sup>79</sup> Barney, J. (1991). Firm Resources and Sustained Competitive Advantage, *Journal of Management*, No. 17, pp. 99-120.

<sup>80</sup> Johnson, G., Scholes, K. & Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>81</sup> Calcagno, M. (undated). *The Evolution of the Competitive Advantage Concept in Strategic Management Studies*, Ca'Foscari University, available at <<http://www.bbk.ac.uk/manop/research/wpapers/mandocs/calcagno99-02.PDF>>, 15.04.07.



Nonetheless, as resources can be seen as the ultimate source of value creation both within and across businesses, the process of identifying, building and deploying valuable resources are critical aspects of both corporate and competitive strategy<sup>82</sup>.

## THE VRIO FRAMEWORK

According to the resource-based view competitive advantage is likely to be generated and sustained if the firms have distinctive or unique resources and competences that competitors cannot easily imitate. Competitive advantage is generally defined as the ability to earn above-average returns for a particular industry on the firm's investments<sup>83</sup>. According to Barney a firm is considered to have a competitive advantage when it implements a value creating strategy not simultaneously being put into practice by any existing or potential competitors<sup>84</sup>. In an intensely competitive world, firms will constantly seek to destroy competitors' superior resources and capabilities through poaching, imitation, replication or substitution. Hence, achieving sustainable competitive advantage is dependent on the firm's ability to preserve its superior resources and competences<sup>85</sup>.

According to Barney a firm needs to have valuable, rare, non-imitable and organisational resources in order to generate competitive advantage<sup>86</sup>. These four criteria developed into the VRIO framework are based on two important assumptions. The first assumption is resource heterogeneity which means that all firms, even those within the same industry, have a different and unique combination of resources and competences which distinguish them from their competitors. The second assumption is resource immobility which explains that the resources and competences that are unique to one firm cannot easily be transferred to another firm<sup>87</sup>.

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<sup>82</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>83</sup> Porter, M. (1985). *Competitive Advantage: Creating and sustaining superior performance*, New York: Free Press.

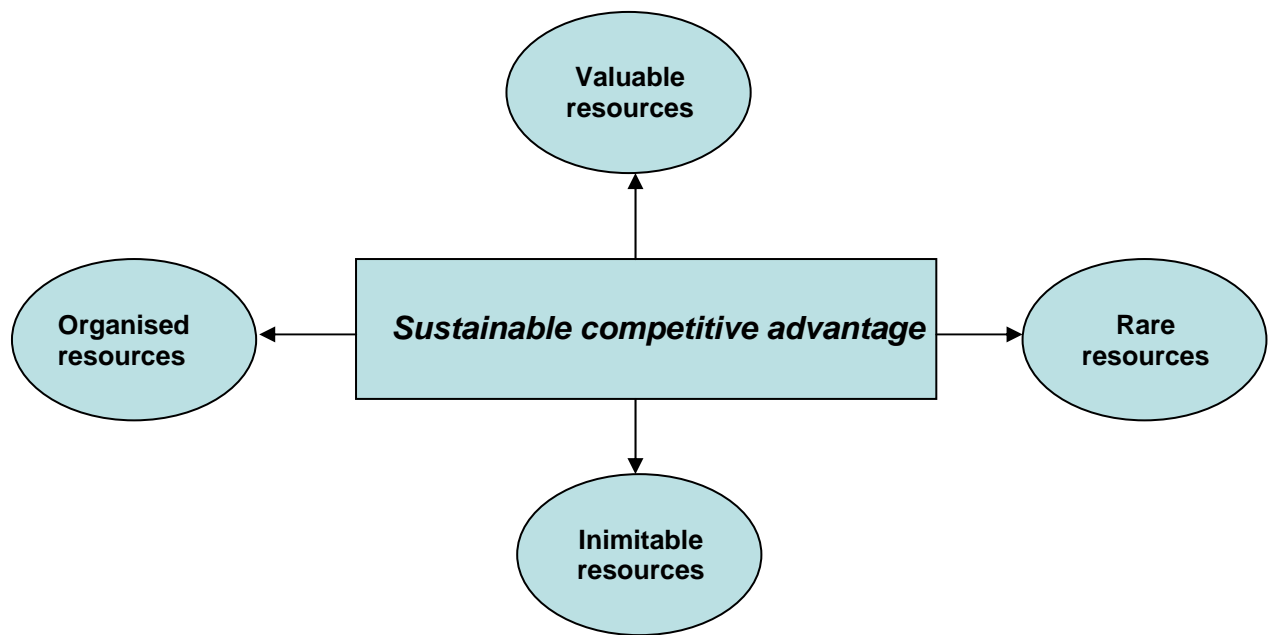
<sup>84</sup> Barney, J. (2001). Is the resource-based view a useful perspective for strategic management research? Yes, *Academy of Management Review*, 26: pp. 41-56.

<sup>85</sup> Sudarsanam S. (2003). *Creating Value from Merger and Acquisitions. The Challenges*, Prentice Hall-Financial Times 2003.

<sup>86</sup> Barney, J. (1991). Firm Resources and Sustained Competitive Advantage, *Journal of Management*, No. 17, pp. 99-120.

<sup>87</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

**Figure 9: The VRIO framework**



### The question of Value

Having resources that are different from other firms is by itself not sufficient to create competitive advantage. The resources must add value to a company, as only value-adding resources can lead to competitive advantage. Non-value adding resources can even possibly lead to a competitive disadvantage<sup>88</sup>. It is however, difficult for companies to identify and evaluate their own resources, and assessing whether they can be a source of sustainable competitive advantage. Generally, a resource is considered to be valuable if it helps the company meet an external threat or exploit an opportunity, and incorporates any of the four common competitive foundations of efficiency, quality, customer responsiveness, and innovation. Efficiency relates to the necessary amount of input a firm uses for any unit of output, and if a firm is a more efficient producer of goods or services than its competitors, then it has an advantage. Innovation refers to the creation of new products or services or new ways of producing or delivering goods or services. Product innovation can be advantageous to companies as it can allow a first-mover advantage and create lock-in effects in the market. Process innovation generally influences efficiency in production or delivery and leads to decreased production and transportation costs. Moreover, quality is the perception that the

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<sup>88</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

good or service performs exceptionally well, while customer responsiveness simply refers to meeting the needs of the customer in a satisfactory way<sup>89</sup>.

According to Collis and Montgomery the value of a firm's resources lies in the complex intersection between components of the firm and its competitive environment. Hence, value is created through the interaction between demand, scarcity and appropriability. This means that a resource adds value to a firm when it is demanded by the customer, when it cannot be copied by competitors, and when the generated profits are captured by the firm. Thus, an important determinant of a valuable resource is whether it fulfils a customer's need better than those of their competitors at a price the customer is willing to pay. However, as prices, competitive offerings and customer's preferences change over time, a firm must constantly re-evaluate their customers' "willingness to pay" and the degree to which their resources meet current and future needs<sup>90</sup>. Moreover, due to the changes in the competitive landscape, resources and capabilities that previously added value may become obsolete<sup>91</sup>.

#### The question of Rarity

Simply possessing valuable resources may not lead to competitive advantage; the resources also have to be rare. A resource is rare simply if it is not commonly possessed by other firms. If a resource is abundantly available, then any competitor could acquire it and consequently replicate the firm's competitive advantage. Furthermore to be a source of sustainable competitive advantage, the rarity of the resource must persist over time<sup>92</sup>. Rare competences can be based on years of experience in for example, brand management or building relationships with key customers, or perhaps the way in which the company is structured. Resources can also be rare if they by nature have limited availability. Moreover, rarity may depend on who owns the competence and how easily transferable it is. Some competences are context-specific and not transferable because they are only of value if used in a particular organisation. It might also be the case that the costs involved in transferring competences from one organisation to another are too high. In all of these cases, a resource or competence

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<sup>89</sup> Gallagher, S. (2006). *Why do firms differ-Internal Analysis*, available at <<http://falcon.jmu.edu/~gallagsr/WDFPD-Internal.pdf>>, 10.04.07

<sup>90</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>91</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>92</sup> Barney, J. (1991). Firm Resources and Sustained Competitive advantage, *Journal of Management*, No.17, pp. 99-120.

can be considered rare. Nonetheless, there is always the possibility that a competitor could find new ways of competing dependent on a different resource or competence base. Furthermore, a resource or competence can be rare if it is embedded in one or few individuals in a firm. This is however, a fragile foundation for a competitive advantage, as these individuals may leave the company. However, more durable advantages may be found in the organisation's competences related to recruiting, training, motivating and rewarding these rare individuals in order to ensure that they stay within the organization. Also rare competences may be embedded in the culture, which potentially attracts people to work for that particular organisation, or that the organisation has a secured preferred access to customers or suppliers. Whilst rarity of strategic resources and competences may provide the basis of a competitive advantage, there are dangers of redundancy as rare capabilities may become obsolete and conversely damage the company<sup>93</sup>.

#### Non-imitable

Thirdly, in order for resources to provide a competitive advantage it also needs to be non-imitable. A resource is non-imitable and non-substitutable if it is difficult for another firm to imitate or substitute something else in its place. A firm can for example create and sustain the ability to meet particular needs of a specific customer group in a superior manner than its competitors, and in ways that are difficult to imitate. Imitating a firm's tangible resources can be relatively easy. However imitating a firm's intangible resources such as tacit knowledge, corporate culture, managerial talents and customer relationships is much more challenging and often impossible<sup>94</sup>. Thus, firms put great effort into keeping these intangible assets embedded in the organisation and increasing their complexity to make them more difficult for competitors to replicate. Nevertheless, almost any resource can be imitated with enough time and money. Even patents that seek to protect an invention from imitation are only valid for a limited period of time. Hence, when analysing the imitability of a resource, it is important to compare the time it will take for competitors to imitate or substitute the resource with the useful life of the resource<sup>95</sup>.

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<sup>93</sup> Johnson, G., Scholes, K. & Whittington, R. (2005). *Exploring Corporate Strategy*, 7th edition. Harlow, US: Financial Times Prentice Hall.

<sup>94</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>95</sup> Gallagher, S. (2006). *Why do firms differ-Internal Analysis*, available at <<http://falcon.jmu.edu/~gallagsr/WDFPD-Internal.pdf>>, 10.04.07.

Firms can imitate in two ways either by direct duplication or substitution. Direct duplication is the most difficult, as it requires an exact match of the organizational components of another firm. Gaining full access to another firm's resources and capabilities is close to impossible unless the competitor acquires the focal firm. Substitution, on the other hand is relatively less demanding, as it does not require a firm to completely match the other firm's resources and capabilities. However, this is still not a simple task and in some cases, there are simply no substitutes available<sup>96</sup>.

The resource-based approach suggests four underlying factors for why imitation is so difficult: time compression diseconomies, path dependencies, casual ambiguity, and economic deterrence. The first reason why imitation is so difficult is time compression diseconomies, which refer to a competitor's inability to rapidly and successfully acquire the resources and capabilities that another firm has developed over time<sup>97</sup>. A second barrier to imitation is path dependencies. A process is path-dependent when events earlier in its development have significant effects on following events<sup>98</sup>. This historic path by which competences have been developed in a firm is often difficult to determine and thus again hard to imitate. Casual ambiguity is the third obstacle, which relates to the difficulties in identifying the causes and effects that initially formed the competitive advantage. This does not just apply to competitors, but even people working within a firm often have a hard time determining the casual determinants of its success. Moreover, casually ambiguous resources are often embedded in complex social structures and interactions in the organisation. They may even depend on the personality of a few special individuals. Consequently, competitors often fail in their efforts to first identify and then imitate another firm's resources and capabilities<sup>99</sup>. The last source of inimitability is economic deterrence. This occurs when a market leader's competitors have the capability to replicate its resources but are hesitant to do so, because of limited market size and large capital investments. Moreover, as such resources involve sunk costs and cannot be reused in a given market; the incumbent firm will aggressively fight any competitor that attempts to replicate its resources. Faced with such a threat, potential imitators

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<sup>96</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>97</sup> Dierickx, I. and Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage, *Management Science*, Vol. 35, No. 12 (Dec. 1989), pp. 1504-1511.

<sup>98</sup> Barnett, W., Greve, H., and Park, D. (1994). An evolutionary model of organizational performance, *Strategic Management Journal*, Vol. 15, Special Issue: Competitive Organizational Behaviour, (Winter, 1994), pp. 11-28.

<sup>99</sup> Lipman, S. and Rumelt, R. (1982). Uncertain Imitability: An Analysis of Interfirm Differences in Efficiency under Competition, *The Bell Journal of Economics*, Vol. 13, No. 2 (Autumn, 1982), pp. 418-438.

may choose not to imitate the resource when the market is too small to profitably support two large competing firms<sup>100</sup>.

Resources may be even more difficult to replicate when there are multiple barriers to imitations, such as both casual ambiguity and path dependencies. Furthermore, imitating a bundle of resources, such as internally consistent strategies can be particularly difficult to imitate and even challenging for the firm itself to reproduce. Nonetheless, imitability is not necessarily a question of either or, but rather a matter of degree of imitability, which is dependent on time and complexity. Moreover, achieving sustained competitive advantage also involves avoiding the risk of substitution. Even if a firm possesses resources and competences that are all of the above, there may still be the risk from substitution, either by another firm finding a substitute for the firm's resource or by finding new ways of using the resource. Hence, the characteristics discussed above do not necessarily prevent imitation or substantiation, but make it more difficult and uncertain<sup>101</sup>.

#### The question of Organization

Even valuable, rare, and non-inimitable resources and competences may not generate sustained competitive advantage, if the resources are not properly organized. A resource is organized if the firm is able to use it to its full potential. Hence, the question is how firms should be organised to realise the full potential of its resources and competences<sup>102</sup>. There are several components within a firm that are important to the question of organization. Such components are often referred to as complementary assets as they themselves do not fully carry out an activity, but rather complement and support the value-adding activities of the firm. The resource-based approach implies that it is not just a few resources and capabilities that enable a firm to gain a competitive advantage, but rather the bundle of many organizational attributes which generates such advantage<sup>103</sup>. Moreover, social complexity is another dimension of the organisation and refers to the socially complex ways of organisation in many firms. A multinational company provides a good example of social complexity,

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<sup>100</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>101</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>102</sup> Conner, K. R. and Prahalad, C. K. (1996). A Resource-Based Theory of the Firm: Knowledge versus Opportunism, *Organization Science*, Vol. 7, No. 5 (Sep. - Oct., 1996), pp. 477-501.

<sup>103</sup> Barney, J. (1997). Gaining and Sustaining Competitive Advantage, *Strategic Management Journal*, Vol. 15, pp. 131-148

having to coordinate their resources across borders. In such companies, it is often the invisible relationships between people and not the formal structures in the organisation that add value<sup>104</sup>.

To conclude, building on the two assumptions of resource heterogeneity and immobility, the VRIO framework suggests three significant lessons. First of all, firms achieve sustainable competitive advantage by possessing valuable, rare, non-imitable, and properly organised resources and competences that are difficult for competitors to match. Therefore, the most important strategic goal for a firm is to identify, develop and leverage such resources to their full potential<sup>105</sup>. Next, imitation is unlikely to be a successful strategy as a firm that completely replicates another firm's resources and capabilities can at best achieve competitive parity and not competitive advantage. Nonetheless, a firm in such a position would in any matter be better off developing and leveraging its own unique resources and competences<sup>106</sup>. Finally, a competitive advantage is not sustainable in the long run. In today's globally competitive world, a firm's main objective is how to sustain its competitive advantage for as long as possible. Yet, in the long run all advantages will erode, and hence it is vital that firms develop strategic foresight that enables them to anticipate future needs and build up resources and competences for future competition<sup>107</sup>.

As illustrated in figure 10 below, a firm's choice of how to internationalise will depend on the external and internal inducements discussed in all of the theories above. From the external analysis of the macro-environment (PESTEL), and the industry environment (Porter's five forces) we have identified the external forces which affects the environment in which a firms operates, and the competitive forces that shaped the industry. Next, the OLI framework suggests that there are three conditions that must be present in order for a company to engage in foreign production. Finally, we have applied the resource based view to analyse the internal environment of firms to see why they differ and how firms can generate a sustainable competitive advantage. The external analysis focuses on identifying the external opportunities

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<sup>104</sup> Kostova, T. and Roth, K. (2003). Social capital in multinational corporations and a micro-macro model of its formation, *Academy of Management Review*, Vol. 28, pp. 297-317.

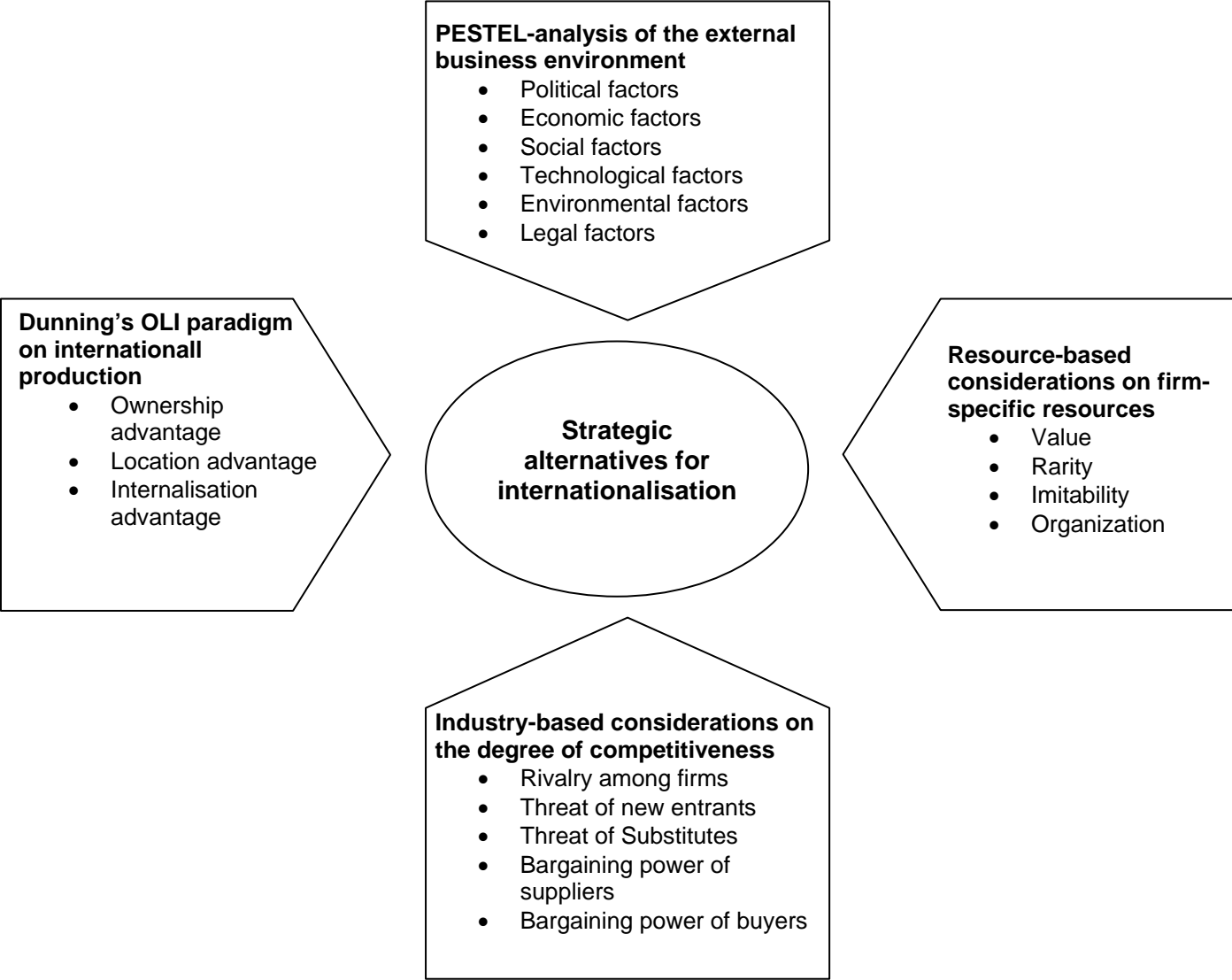
<sup>105</sup> McEvily, S. and Chakaravarthy, B. (2002). The persistence of knowledge-based advantages, *Strategic Management Journal*, Vol. 23, pp. 285-305.

<sup>106</sup> Mosakowski, E. (1998). Entrepreneurial resources and organizational choices, *Organization Science*, Vol. 9, No. 6 (Nov. - Dec., 1998), pp. 625-643.

<sup>107</sup> Cockburn, I., Henderson, R. and Stern, s. (2000). Untangling the origins of competitive advantage, *Strategic Management Journal*, Vol. 21, pp. 1123-1145.

and threats that affect firms, while the internal analysis concentrates on the internal strengths and weaknesses of firms<sup>108</sup>.

**Figure 10: Forces influencing the strategic alternatives for internationalisation**



<sup>108</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

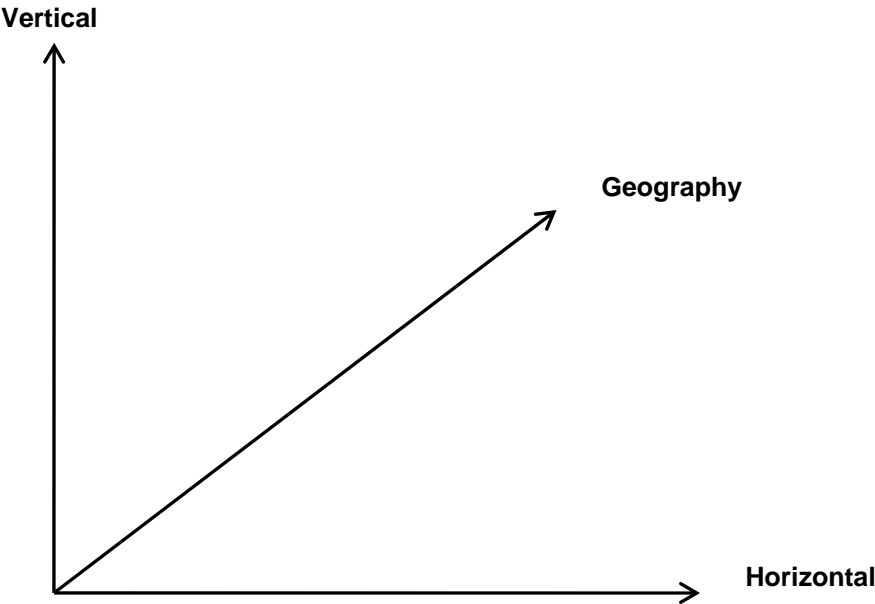


# CHAPTER 6: STRATEGIC ALTERNATIVES

## INTRODUCTION

Many firms cannot reach their desired growth rate purely through organic growth and thus grow through non-organic modes of expansion. Expansion within an industry as well as across industries usually begins from the core and proceeds along the three dimensions: horizontal, geographical and vertical integration.

Figure 11: Dimensions of expansion<sup>109</sup>



The scope of any firm can be represented along these three dimensions. To begin with most firms pursue expansion within their original industry, by increasing the scale of output to achieve economies of scale and increase market share. This can be done either through vertical integration in order to gain more control over the upstream or downstream activities of the value chain, or through horizontal integration, by expanding along the same level of the value chain. A third alternative is to integrate geographically and hence gain access to new markets, and this might also come as a result of the latter two. In most cases, firms pursue such expansion strategies proactively in order to increase their market size and enhance their competitiveness. However, the same strategies can also be implemented reactively, to defend

<sup>109</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

a firm's position as competitors move to exploit scope advantages<sup>110</sup>. For the purpose of this paper, we want to see whether expansion along the horizontal or vertical dimension can lead to increased geographical expansion. This will apply for all of the expansion modes discussed below.

### Horizontal integration

Horizontal integration refers to expansion of activities along the same level of the value chain. This may be achieved through internal growth or external growth by joining forces with a firm selling similar products or services. A firm may also expand horizontally into unrelated businesses. The main goal of horizontal integration is to strengthen a company's position relative to competitors and increase market share. This can be done either by increasing the product range of a firm to better meet the expectation of customers, or by combining the core activities of two firms and hence increase their scale of operations. Consequently, economies of scale occur, as the average unit costs of production decreases by spreading the fixed costs over larger quantities of production. Horizontal integration may also lead to economies of scope, achieved by sharing common resources such as R&D and marketing, in the production or sales of products. Moreover, another motive behind horizontal expansion can be the elimination of a strong competitor, which will reduce the competition in the industry, or increased bargaining power of suppliers and customers<sup>111</sup>. Hence, a horizontally integrated company enjoys the benefits of increased market power and hence stronger influence on prices and supply in a particular market. However, if the competition in an industry is significantly reduced as a result of a horizontal integration, anti-trust issues may arise. Apart from legal issues, other drawbacks related to this dimensions of expansion are whether the anticipated economic gains will actually be realised. Firms have a tendency to overestimate the horizontal scope between their products, and hence the expected synergies might not be realisable. In order to deal with this problem, it is important that firms make an explicit horizontal strategy on how to realise the potential synergies as they will not occur instinctively<sup>112</sup>.

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<sup>110</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>111</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>112</sup> Quick MBA, *Horizontal integration*, available at <<http://www.quickmba.com/strategy/horizontal-integration/>>, 03.05.07

## Vertical integration

A vertical integration involves expansion upstream or downstream the value chain in product-related activities. By integrating vertically, companies can improve their coordination of value chain activities, as they can integrate the sourcing and production with the marketing and sales of their products. A vertical integration can be pursued in two ways, either through a backward integration, in which a company expands upstream and integrates with a supplier. The main rationale of this would be to secure access to supplies and materials. Moreover, it improves the ability to differentiate the product offering by having increased control over inputs. Conversely, in a forward integration, a company integrates with its customer in order to better serve its final consumers and have increased control over distribution channels. A vertical integration can either be in the form of a market-extension, where the two companies sell the same products in different markets or a product-extension, in which the companies sell different, but related products in the same market. Vertical integration offers several benefits. The main reason behind a vertical integration is to expand a company's business by offering a wider range of products or developing a broader level of core competences. Moreover, a vertical expansion may increase the entry barriers in the industry for potential competitors if the firm gains sole access to a resource. Also, high taxes and regulations on market transactions make it more cost efficient to organise several value chain activities within a single firm. Besides, firms vertically integrate to protect themselves from powerful suppliers or customers, and hence seek to increase their bargaining power. Moreover a vertical integration is appropriate when there are strategic similarities between vertically related activities in the value chain, and there are large production quantities so that the firm can benefit from economies of scale. Firms can also reduce transportation costs if vertical integration results in closer geographic proximity of markets. However, this dimension of expansion also has several drawbacks which may counteract any potential gains. If a firm decides to integrate forward, it might also need to increase its upstream capacity to ensure sufficient supply from the increased demand from its downstream operations. Also, if a firm integrates backward, the lack of competition among suppliers may lead to potentially higher costs due to lower efficiencies. Lastly, this type of expansion is not desired when the product is a common available commodity and the core competencies between the value chain activities are very different<sup>113</sup>. A vertical integration can also change the industry structure, by

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<sup>113</sup> Quick MBA, *Vertical integration*, available at <<http://www.quickmba.com/strategy/vertical-integration/>> 03.05.07.

removing a supplier or customer from the market. Consequently, anti-competitive issues may arise as their enhanced market power may prevent the entry of new businesses<sup>114</sup>.

Whether a firm chooses to expand along the horizontal or vertical dimension, it still faces several alternatives in what expansion mode to pursue, ranging from internal development, mergers and acquisitions, or strategic alliances. None of these alternatives assures an easy expansion, and choosing among them involves several trade-offs. Hence, firms need to carefully evaluate each alternative against its needs and requirements for the specific competitive situation<sup>115</sup>.

## INTERNAL DEVELOPMENT

First of all, most firms grow organically through internal development. This means that companies grow as they incrementally develop and leverage their corporate resources to increase their output and sales. There are however both benefits and drawbacks with this mode of expansion.

### Benefits

Internal development allows for learning within the firm itself. Moreover, the incremental decision-making approach accommodates the constantly changing environmental conditions. Consequently, internal development involves less risk as decisions can be taken over a longer period of time, and not instantly as with other modes of expansion. In addition to being the only way of expansion in certain cases, it is also the easiest way of transferring corporate resources into a new business area. This is because the company's employees understand the company's culture and embedded tacit knowledge, and can directly deploy those resources in a new context and shape the business from its inception. Thus, when firm wants to leverage an organizational resource or intangible asset, the preferred mode of expansion is internal development. Furthermore, internal development permits firms to take advantage of positive externalities from the development process, involving the accumulated learning and experience as the company grows. This tacit know-how can become an important resource in

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<sup>114</sup> No author, *Vertical merger*, available at <<http://law.jrank.org/pages/11082/Vertical-Merger.html>>, 03.05.07

<sup>115</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

the firm's pursuit for further growth. Moreover, through growing internally and leveraging existing resources, a firm is also committed to creating an environment for intrapreneurship, in which the creativity of individuals is highly appreciated<sup>116</sup>.

### Drawbacks

On the other side, internal development has some limitations. First of all, it does not allow a firm to quickly acquire the necessary resources it does not possess, which is possible with other modes of expansion. A firm which is in the phase of developing its own resources is very fragile to external competition and can increase rivalry in an industry through the addition of new capacity. Furthermore, unlike other expansion modes where firms have the possibility of cancelling the agreement or even selling off the acquired company if it fails, investment in an unsuccessful internal development project is very difficult to recover<sup>117</sup>.

## MERGERS AND ACQUISITIONS

Mergers and acquisitions are a major mode of expansion along all the three dimensions horizontal, vertical and geographical. Although there is a clear distinction between a merger and an acquisition, the two terms are often used interchangeably. A merger occurs when two firms decide to join forces and combine their assets, operations and management to create a new legal entity. On the other hand, an acquisition is the transfer of control of assets, operations, and management from the target firm to the acquiring firm, in which the former becomes a part of the latter<sup>118</sup>. The main difference between the two is that mergers involve a much higher degree of cooperation and integration between the partners than with acquisitions.

Often, mergers take place between firms of relatively equal size, while in acquisitions the acquiring firm is usually larger. Nonetheless, some acquisitions are referred to as hostile takeovers, meaning that the acquisition is made despite the resistance of the target company.

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<sup>116</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>117</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>118</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

In fact, many of the so called merger-of-equals turn out to be an acquisition. Even if two partners are considered to be equal, most of the mergers are per definition an acquisition, in which one company takes control over the other<sup>119</sup>. However, to avoid the negative connotations of an acquisition, the merging firms often claim that it is a merger of equals, even if it is technically an acquisition. Thus, the two terms are often used interchangeably. However; in order to classify whether the combination is a merger or acquisition, the relative size of the companies and the friendliness of their intentions needs to be taken into account<sup>120</sup>. To begin with, we will include a discussion on the benefits and drawback of M&As.

## Benefits

There are many different motives underlying a decision to use mergers and acquisition as a mode of expansion. The main argument is that M&As will create synergies which enable the company to achieve its strategic goals in a more efficient and less costly manner. Sirower defines synergy as follows: “Synergy is the increase in competitiveness and resulting cash flows beyond what the two companies are expected to accomplish independently”<sup>121</sup>. In other words, the term synergy refers to the increased effectiveness and performance produced as a result of the combined actions of two firms.

Merging with or acquiring an existing firm allows a company to obtain instant access to resources and competences it does not possess on its own. This is particularly important where the necessary resources and competences that are required for competitive advantage within an industry are difficult to develop internally or imitate from competitors<sup>122</sup>. Hence, the combination of the firm’s resources and competences are expected to result in revenue enhancement and cost reductions, and improve the scale and quality of their operations. The firms use their complement resources in joint efforts, such as the development of new technology. They can also achieve economies of scale by combining their production capacities, and hence mitigate the rivalry in an industry. Moreover, an M&A can also be motivated by increasing the size of a company and enhance and consolidate market power.

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<sup>119</sup> Dorf, R. C. and Byers, T. H. (2005). *Technology Ventures-from Idea to Enterprise*, International edition, McGraw-Hill.

<sup>120</sup> Investopedia (2007) available at <[http://www.investopedia.com/terms/m/merger\\_of\\_equals.asp](http://www.investopedia.com/terms/m/merger_of_equals.asp)> , 12.06.07

<sup>121</sup> Sirower, M. L. (1997). *The synergy trap : how companies lose the acquisition game*, New York : Free Press

<sup>122</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2<sup>nd</sup> edition, Boston,Mass: McGraw-Hill/Irwin.

This can enable firms to overcome barriers to entry in new markets and increase their competitiveness in increasingly complex and dynamic environments with rising pressure from stronger global competition<sup>123</sup>. Lastly, companies that pay high taxes can merge with or acquire a company that have accumulated tax losses, and hence offset their revenues against losses and reduce tax. This also applies to companies with high debt capacity as increasing leverage also bring tax benefits in terms of tax-deductible interest payments<sup>124</sup>.

## Drawbacks

Nevertheless, according to a number of studies, about two-thirds of M&As fail to realize the expected synergy gains<sup>125</sup>. There are several reasons for this, and problems can be identified both prior to and after the M&A. In the pre-acquisition phase, the most prominent problem is that the M&A turn out to be a very costly way of expanding. This is because the acquiring firm often has to pay high premiums over share price for its target. Such premiums can potentially offset the value created from the deal. The highest bidder of a deal either possess important and secretive information about the value of the target enabling them to create substantial gains from the M&A, or the firm is merely suffering from the “winners curse”. This means that a firm by mistake values the target company higher than everyone else. Another reason for overpaying might be that firms get carried away in the bidding process and winning becomes important due to managerial motives rather than for economic reasons. Unfortunately, there is significant evidence suggesting that such problems frequently occur<sup>126</sup>.

Another obstacle to M&As is the inadequate screening of targets in the due diligence process and failure to achieve strategic fit among the two parties. Strategic fit relates to the effective matching of complementary resources and competences, and in most cases there are only a few resources or competences that are of actual value to the other firm. Hence the combined company will have to dispose of the redundant resources and this often involves significant

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<sup>123</sup> Dorf, R. C. and Byers, T. H. (2005). *Technology Ventures-from Idea to Enterprise*, International edition, McGraw-Hill.

<sup>124</sup> Kolodziej, A. and Niesyto, K. (2006). *M&A as a way to create value-case of Norsk Hydro ASA*, Master Thesis, NHH.

<sup>125</sup> Dorf, R. C. and Byers, T. H. (2005). *Technology Ventures-from Idea to Enterprise*, International edition, McGraw-Hill.

<sup>126</sup> Dorf, R. C. and Byers, T. H. (2005). *Technology Ventures-from Idea to Enterprise*, International edition, McGraw-Hill.

costs and valuable management time<sup>127</sup>. Although these obstacles are significant, the most challenging obstacles occur in the post-merger integration phase.

In the post-merger integration phase, an important factor to take into consideration is the organizational fit between the two parties. Organizational fit refers to the similarities in cultures, systems and structures, between the two parties, and integrating them into one corporate culture is not unproblematic. Moreover, there is usually one stronger party in this process, and power politics determines who will get the head positions and what culture and system will prevail. This often leads to dissatisfaction among employees and hence sufficient management in this process is of utmost importance. Traditionally, the main focus has been on the financial and strategic matters of the M&A. Consequently, human and socio-cultural factors have been greatly overlooked. Recent research however, suggests that this is one of the main reasons why M&As fail. Consequently, more efforts should be directed at this matter. Moreover, in cross-border M&As, integration may be even more difficult due to the differences between national cultures, institutions and business systems<sup>128</sup>.

#### The industry-based view of M&As

Firms that are faced with intense rivalry may attempt to change the configuration of the five forces to increase competitive advantage and their profitability through M&As. For instance, a firm whose profitability is reduced because of the threat of new entrants may want to merge with another firm to increase economies of scale and hence raise the barriers to entry in the industry. Moreover, rivalry in an industry can be reduced if the merger leads to restricted access to suppliers and distribution channels, or enhances the bargaining power of the firm over suppliers and buyers. Further, a firm in a mature industry experiencing downward pressure on prices due to overcapacity can merge with another firm to reduce capacity and hence also price competition. Thus, mergers can alter the configuration of the five forces, and hence change the structure of competition in an industry. However, as such mergers often trigger a number of subsequent mergers; the competition may become so reduced that anti-trust authorities have to intervene<sup>129</sup>.

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<sup>127</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-bases Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>128</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

<sup>129</sup> Sudarsanam S. (2003). *Creating Value from Merger and Acquisitions*. The Challenges, Prentice Hall-Financial Times.



## The resource-based view of M&As

The resource-based view suggests that M&As is a good way of filling the gap between a firm's current endowment of resources and competences, and the desired endowment. A firm can either seek to obtain supplementary resources to get more of the resources it already has, or attain complementary resources which can be combined effectively with its current resources. Also, as many of a firm's resources often are embedded within the organisation, it is difficult to get access to them by other means. However, the resource-based view of mergers addresses the potential challenges regarding valuation, negotiation and organizational integration during the merger process. M&As offer an opportunity to exchange otherwise non-tradable resources, however this poses certain implications as the markets are imperfect with few buyers and sellers. Due to the heterogeneity of both buyers and sellers, there is a low degree of transparency in such transactions; hence a given bundle of resources and competences will have different values to different buyers. The value of a certain target depends on the potential fit and expected synergies between the buyer's resources and those of the target. Moreover, the implication of how to measure the costs involved in this process and how a buyer will pay for the target influence the valuation. Hence, prospective buyers evaluating targets often limit their search to fit certain criteria in order to simplify this process<sup>130</sup>.

## STRATEGIC ALLIANCES

Strategic alliance is another alternative that firms have in their expansion strategies. Alliances intend to capture the benefits of internal development and M&A while avoiding the drawbacks of both. Strategic alliances can be defined as "voluntary agreements between firms involving exchanging, sharing or developing products, technologies, or services<sup>131</sup>". In other words, a strategic alliance describes cooperation where two or more firms share resources and activities to pursue a strategy as a means of achieving the same objectives. Strategic alliances can be seen as a compromise between pure market transactions and complete ownership solutions. It can take on a variety of forms, ranging from non-equity based contractual agreements such as R&D contracts, turnkey projects and licensing to equity-based contractual

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<sup>130</sup> Wernerfelt, B. (1984). A Resource-based View of the Firm, *Strategic Management Journal*, Vol. 5, pp. 171-180.

<sup>131</sup> Gulati, R. (1998) Alliances and networks, *Strategic Management Journal*, 19, pp. 293 in Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

agreements such as joint ventures. Contractual agreements that do not involve equity require a lower level of commitment and are often limited in scope and duration. Equity-based alliances, on the other hand involve a higher level of commitment as it involves strategic investment and cross-shareholding<sup>132</sup>.

## Benefits

The main motives behind strategic alliances are cost and risk reduction, technology sharing, product development, and gaining access to complementary assets and capabilities. In a fiercely competitive environment firms are increasingly concerned with finding partners that possess complementary resources and competences needed to achieve competitive advantage. By pooling their resources the firms can easier and more efficiently achieve their objectives. Moreover, co-specialisation allows each firm to concentrate on the activities that best match their competences. Furthermore, a strategic alliance allows the firms to only select the resources and competences that they need, and hence they can avoid dealing with redundant resources, as is the case with M&As. Firms typically engage in strategic alliances when they want to get access to new markets and need the local knowledge and expertise in distribution, marketing and customer support. Strategic alliances are also common between firms in different parts of the value chain. This allows for technology sharing and learning, and co-development of products and services. Furthermore, the need for critical mass to reduce costs and improve customer offering is another determinant for engaging in an alliance with either competitors or providers of complementary products<sup>133</sup>.

Properly structured strategic alliances can be a less expensive alternative to mergers and acquisitions, as it does not involve a full integration of the two companies but rather cooperation on certain business areas. The success of a strategic alliance is dependent on how well firms develop and leverage soft relational capabilities, such as inter-firm relationships relative to the hard assets such as technology and capital. It is of the essence that the alliance is based on trust and confidence between the partners, as a purely contractual agreement can more easily lead to breach of contract from either of the parties. Another critical success factor is to minimise the market overlap between the two partners to avoid conflicting

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<sup>132</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>133</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

interests. Moreover, it is important that the strategic alliance have a degree of autonomy with strong leadership and commitment from the two partners. Further, the firms must account for the differences in management styles and corporate cultures and create a new common style and culture for the sole purpose of the strategic alliance<sup>134</sup>.

### Drawbacks

Despite the potential benefits, strategic alliances are also associated with a number of drawbacks. The most prominent challenges are related to the issues of control and leadership. There is often a power struggle between the two parties, regarding who will contribute the most and who will determine the strategy for the alliance. Moreover, there is always uncertainty involved in a strategic alliance, and there is a risk that the alliance may not turn out as planned. Firstly, partners may have hidden agendas or diverging interests which are not obvious when two parties initially enter into an agreement. There may be the risk that one of the parties walks out on the deal bringing with them valuable resources and competences without having given anything in return. Moreover, if one of the parties becomes more powerful, it might change the terms of deal and take over the weaker party. Firms also risk becoming too dependent on their partners, creating serious problems when the alliance ends or if a partner forms a relationship with another partner. Hence the potential for rivalry and partner opportunism is a big threat to a strategic alliance<sup>135</sup>.

A legal structure of an alliance can be useful in addressing these issues and setting the terms of the deal. There is however limitations as to what can be achieved through legal means. The best solution would be to find a partner with closely aligned business interest to set a common strategy. Hence, knowing and understanding the motivations and incentives of all partners are critical success factors for any strategic alliance<sup>136</sup>.

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<sup>134</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation

<sup>135</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

<sup>136</sup> Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin.

# **PART 5: EXTERNAL & INTERNAL ANALYSIS OF STATOIL**

## **CHAPTER 1: THE PESTEL FRAMEWORK**

The PESTEL framework aims to evaluate the business environment in which Statoil operates by analyzing the constantly changing external factors that influence the company. We will focus on the forces we believe will have the largest impact on the company today. It is crucial to understand the external environment in which Statoil operates, in order to match the firm's strengths and weaknesses with the market opportunities and threats, and hence increase their international competitiveness. As the oil industry is a truly global one, we will discuss the main trends and drivers of change on an international level and not on a country-by-country basis.

### **POLITICAL ENVIRONMENT**

The political environment will have a large impact on Statoil's opportunities for international growth and investment choices as it operates under demanding political conditions worldwide. These forces will especially determine its chances of getting access to resources and establish relationships with host governments and NOCs. We will mainly discuss the latest political trends, the current major political risks and the role of OPEC.

#### **Political trends**

The control of oil and gas resources is becoming increasingly political. Due to the large profit potential of the industry countries want to have control of its own resources. Hence, resource-holding nations have nationalized most of their oil fields and are becoming increasingly powerful. This empowerment completely changes the rules of game in the industry. Governments have the authority to distribute operator ships or licences as they prefer. Thus, getting access to the resources is becoming more difficult for IOCs as resource holders will in most cases favour their own NOCs and license the exploration to them. Consequently, IOCs

are forced to undertake other, more complex projects, which often require new technology and larger capital investments. Moreover, the increased costs and larger risks involved in such projects can lead to project delays and other difficulties. Nonetheless, the NOCs are currently not in the possession of sufficient technology or capacity to complete the projects needed to cover the world oil supplies. As a result, the IOCs are valuable partners as they have access to markets and technology. Some analysts even expect that the major oil companies will transform into becoming service providers of expertise and advanced exploration technology to the state owned NOCs in the future<sup>137</sup>. These changes will have a major impact on the traditional oil companies.

### Political risks

Political events that affect the security and profitability of firms are considered to be political risks. The key political risks in the petroleum industry arise from sovereign risk referring to the policies and decisions of host governments or conversely, the absence of effective regulation and governmental intervention. Moreover, wars and local conflicts are part of the political risks oil companies are facing.

High levels of political risks in recent years have led to increased difficulties for oil companies. Political instability in areas such as the Middle East affects the production, supply and consequently the oil prices in the industry. Moreover, the violent conflicts associated with the extraction of crude oil in Nigeria also had negative effects on the total global oil supply<sup>138</sup>. In Russia, the lack of consistent and effective legislation has led to serious difficulties in terms of contractual and financial agreements for oil exploration companies. The oil industry is also especially exposed to corruption. The explanation for this is that the majority of the proven oil reserves are under the control of states where there is a lack of efficient laws and regulation, and authoritarian regimes prevail. Often, the revenues from oil are captured by private interests and public officials who often require bribes to allow oil companies to explore for oil<sup>139</sup>. This poses challenging ethical dilemmas for the oil companies. Nonetheless, there are efforts being made to improve the transparency of the sector.

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<sup>137</sup> Morgan Stanley (2007). *Oil & Gas, the value in Europe*, Morgan Stanley Research.

<sup>138</sup> Business Monitor International (2006). *Nigeria: Risk Summary*. *West & Central Africa Monitor*; December, Vol. 7 Issue 12.

<sup>139</sup> Karl, T.L., (1997). *The Paradox of Plenty: Oil Booms and Petro-States*, University of California Press, available at <[http://www1.transparency.org/integrity\\_pact/dnld/tiq-sept2003.pdf](http://www1.transparency.org/integrity_pact/dnld/tiq-sept2003.pdf)>, 23.05.07

There are also political risks involved in host governments altering the fiscal terms for foreign oil companies. As there is a tendency for host governments to want increased control of their resources, they tighten their fiscal terms and increase taxes imposed on foreign firms. Host governments suddenly changing the terms the companies are currently operating under further increases political uncertainty. This is currently happening in Venezuela as the control of resources is being transferred to the national government at the expense of oil companies currently in operation<sup>140</sup>. Clearly these political risks have negative effects on the total global oil industry.

### The role of OPEC

OPEC plays an important role in the political arena of the oil industry as they supply more than 40 percent of the world's oil and they possess about 79 percent of the world's total proven crude oil reserves. Their mission is to coordinate the oil production and supply of the member countries through the allocation of quotas, in which each member's quota is determined on the basis of its oil reserves. Such output quotas can have a major impact on the energy markets<sup>141</sup>. Nonetheless, each member state maintains control of its own production capacity, which can be developed according to the objective of their national oil industry<sup>142</sup>. OPEC aims to ensure the stabilisation of oil prices, and is willing to take action if the price of oil decreases, by reducing their supply. OPEC has already reduced production from the Middle East to support high prices. Nevertheless, the IOC's restricted access to resources will most likely lead to an increased demand for resource holding oil. Thus, OPEC might not have to cut their supplies for a long period of time to maintain a high price level<sup>143</sup>.

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<sup>140</sup> UBS Investment Research (2006). *Oil Companies, Major - Global Analyzer*, UBS Limited.

<sup>141</sup> The Industry Handbook, *Oil Services Industry*, available at <[http://www.investopedia.com/features/industryhandbook/oil\\_services.asp](http://www.investopedia.com/features/industryhandbook/oil_services.asp)>, 20.05.07

<sup>142</sup> Deutsche Bank (2006). *European Integrated Oils, Angola – Increasing OPEC's influence*, Deutsche Bank AG/London, 04.12.07.

<sup>143</sup> OPEC's website, available at <[www.opec.org/home](http://www.opec.org/home)>, 13.05.07

## ECONOMIC ENVIRONMENT

The macroeconomic trends influence the performance of the industry and will also affect Statoil's activities in the market. We believe that the most important economical forces that will influence the industry consist of the oil price level determined by demand and supply, and production costs including taxes, interests and inflation rates etc. These economic factors will largely affect the profit potential of the oil companies and help estimate the potential size of the market.

### The drivers of petroleum prices

A major issue in the global oil and gas markets is the influence of the oil and gas prices. As with every other commodity the prices of oil and gas fluctuate over time as a result of changes in the demand and supply. Still potentially volatile, prices have currently reached their highest levels since the Iran-Iraq war of the 1980s, resulting in strong growth for the global oil and gas market<sup>144</sup>.

The recent escalation of gas and oil prices seems to be caused by demand exceeding supply<sup>145</sup>. Historically, demand for petroleum has been more stable than the supply of petroleum. Demand is influenced by many factors such as political instability, the availability of energy substitutes, petroleum prices, economic growth and weather conditions. Consequently, the consumption pattern varies significantly around the world. The demand for oil and gas has recently increased despite the high levels of the oil price. This is largely due to increased demand from emerging economies, such as China and India. More than 62 percent of the increase in world primary energy demand between 2000 and 2030 will come from developing countries, particularly Asia. This mainly results from their rapid economic and population growth, industrialisation and urbanisation<sup>146</sup>. Moreover, the demand for transportation fuel has been stable in traditional markets, and this trend is likely to continue, as it will be difficult to substitute other sources of energy as transportation fuel in the near future<sup>147</sup>.

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<sup>144</sup> Datamonitor (2006) *Global Oil & Gas, Industry profile*, available at <[www.datamonitor.com](http://www.datamonitor.com)>, 25.05.07

<sup>145</sup> Morgan Stanley (2007). *Oil & Gas, the value in Europe*. Morgan Stanley Research

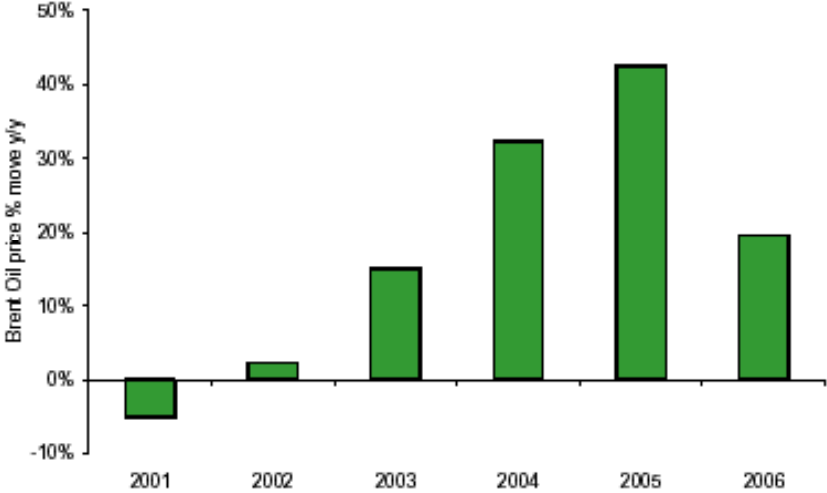
<sup>146</sup> IEA, (Undated). *30 Key Energy Trends in the IEA & Worldwide*, available at <[http://www.iea.org/textbase/nppdf/free/2005/energy\\_trends.pdf](http://www.iea.org/textbase/nppdf/free/2005/energy_trends.pdf)>, 20.04.07

<sup>147</sup> UBS Investment Research (2006). *Oil Companies, Major Global Analyzer*. UBS Limited.

Supply, on the other hand fluctuates more than demand, and is mainly influenced by access to resources, production costs, weather conditions, government policies and geopolitical risks. In recent years, the global supply of petroleum products has been restricted, as access to resources has become more difficult due to the increased control by the national resource holders. Moreover, maturing oil and gas reserves in combination with more technically challenging and costly production have had a negative effect on supply. Further, geopolitical problems in many oil and gas producing regions, notably the Middle East and Russia have also led to unstable supplies. Consequently, production has declined in key markets<sup>148</sup>. Also, climate changes and damages caused by natural disasters have affected the supply of oil and gas<sup>149</sup>.

As evident from the graph below, the percentage growth in the oil price has increased significantly during the three last years. In 2006 however, the rise in the oil price slowed down resulting from a reduction in world growth rates and less political tension<sup>150</sup>. Prices are, however expected to stabilize, but remain high, due to the problems on the supply side and OPEC’s willingness to defend the prices with production cuts<sup>151</sup>.

**Figure 12: Oil price growth (%)**<sup>152</sup>



<sup>148</sup> UBS Investment Research (2006). *Oil Companies, Major Global Analyzer*. UBS Limited.  
<sup>149</sup> Datamonitor (2006) *Global Oil & Gas, Industry profile*, available at <www.datamonitor.com>, 25.05.07  
<sup>150</sup> Morgan Stanley (2006) , *Oil & Gas Twilight Zone*, Morgan Stanley Research Europe, 21.07.06.  
<sup>151</sup> UBS Investment Research (2006). *Oil Companies, Major Global Analyzer*. UBS Limited.  
<sup>152</sup> Morgan Stanley (2007). *Oil & Gas, The Value of Oil in Europe*, Morgan Stanley Research Europe, 29.01.07.



## Industry cost inflation

Although oil prices have been record high in the past few years, many of the integrated oil companies have struggled with lower profitability. Even if the industry has experienced record earnings, increasing costs inflation offsets much of the earnings. According to industry estimates, the inflation of the two last years has possibly added 50 percent to capital costs of projects<sup>153</sup>. The initial capital investment required to develop fields are extremely high and as production is becoming increasingly technically demanding, these costs are rising even more<sup>154</sup>. There are also higher project costs related to shortage of skilled labour resulting in higher wages. Furthermore, expenditures associated with the extensive legislative requirements regarding emissions, groundwater contamination, prevention of wastage and drilling permits are threatening margins<sup>155</sup>. Moreover, the companies operating in the industry are imposed with higher taxes, as host governments and resource owners are becoming more eager to maximize their own profits. In addition, the international oil companies have had limited major exploration success, driving the reserve replacement rates down and hence production.

Consequently, even if the net income of oil companies are currently increasing due to the high levels of oil prices, the future profitability of the industry is threatened as a result of increased cost inflation. The oil companies are concerned that if oil prices stop rising or even fall, the increased costs will further pressure their margins<sup>156</sup>. Hence, due to the inflationary pressures in the industry, oil prices well above historical levels are now required for the continued profitability of many international oil companies<sup>157</sup>.

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<sup>153</sup> UBS Investment Research (2006). *Oil Companies, Major Global Analyzer*. UBS Limited.

<sup>154</sup> IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future*, available at <[http://www.iea.org/Textbase/publications/free\\_new\\_Desc.asp?PUBS\\_ID=1568](http://www.iea.org/Textbase/publications/free_new_Desc.asp?PUBS_ID=1568)>, 10.03.07

<sup>155</sup> Reuters (2007), *Oil & Gas-Integrated : Overview*

<<http://www.investor.reuters.com/business/IndustryDmDescr.aspx?industry=OILINT&target=%2fbusiness%2bussecindustry%2fbussecindfake%2fbussecindoverview&page=dmdescr>>, 03.05.07

<sup>156</sup> Morgan Stanley (2006) , *Oil & Gas Twilight Zone*, Morgan Stanley Research Europe, 21.07.06.

<sup>157</sup> UBS Investment Research (2006). *Oil Companies, Major Global Analyzer*. UBS Limited.

## SOCIAL ENVIRONMENT

We have defined social forces as the ways in which companies in the industry are influenced by changes in the society. We believe that the most important social forces that shape and change the global oil industry are demographic changes, changes in the income distribution and lifestyles, levels of education, in addition to a growing concern for the environment.

Firstly, the current changes in demographics due to the ageing of the baby boomers will affect oil companies, as a significant portion of their workforce will soon be retiring. Moreover, the industry seems to be less attractive among young people as many of the oil companies have a bad image of being greedy and unethical. As a result, securing access to skilled human capital has become increasingly challenging and there is currently a war for talent within the industry. Secondly, there is a growing demand for petroleum due to a general increase of the world's population, and strong economic growth and industrialisation in emerging markets. Moreover, improvements in the living standards in emerging economies have increased their energy consumption even further<sup>158</sup>. These factors have led to significantly higher CO<sub>2</sub> emissions, and consequently an increased concern for the environment. The growing concern and pressure for the protection of the environment, affects the oil companies, as people demand products that use less energy in order to reduce the CO<sub>2</sub> emissions. Moreover, there is a wider range of stakeholders for oil companies to consider when operating around the world, such as NGOs, host governments, and other communities. It has become necessary for oil companies to develop long-term relationships and positively contribute to the development of local communities<sup>159</sup>.

Developing countries that are dependent on petroleum as their main source of revenue are also among the most economically troubled and environmentally damaged countries in the world. Statistics show that incentives to create wealth through good policies and institutions may diminish because of the relatively effortless ability to generate wealth from its natural resources. Consequently, local governments might underestimate the value of educating its people and getting access to skilled labour in these areas are challenging<sup>160</sup>. This underlines

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<sup>158</sup> IEA, (Undated). *30 Key Energy Trends in the IEA & Worldwide*, available at <[http://www.iea.org/textbase/nppdf/free/2005/energy\\_trends.pdf](http://www.iea.org/textbase/nppdf/free/2005/energy_trends.pdf)> , 20.04.07

<sup>159</sup> Ling, A. (2004). *Our experience in Energy: Social & Environmental Issues Count*, Goldman Sachs Investment Research. 16.06.04.

<sup>160</sup> Karl, T.L., (1997). *The Paradox of Plenty: Oil Booms and Petro-States*, University of California Press, available at <[http://www1.transparency.org/integrity\\_pact/dnld/tiq-sept2003.pdf](http://www1.transparency.org/integrity_pact/dnld/tiq-sept2003.pdf) 23.05.07>, 01.06.07.

the importance of oil companies to be socially committed and engage in development projects in the countries they operate in.

## TECHNOLOGICAL ENVIRONMENT

The technological environment and infrastructure have a major impact on the profitability of the global oil companies. First of all, as international oil companies are driven towards more challenging locations to find reserves, the know how to exploit those reserves profitably is becoming increasingly important<sup>161</sup>. Consequently, in order to increase exploration success rates, enhance oil recovery rates and reduce costs oil companies need to constantly develop new technology and learn how to use it more effectively<sup>162</sup>. Secondly, with increasing demand from emerging markets, this calls for large developments of infrastructure in order to profitably serve the global customers. Finally, technological progress is necessary in order to improve the security and safety of oil and gas assets.

### Spending on R&D in technology

Traditionally governments from OECD countries with a natural resource base like Canada, Norway, and the United States have invested the most in R&D of technology for the petroleum industry. As these countries' national resources are depleting and most of the remaining conventional resources and future production potential are in non-OECD countries, they will become more dependent on the OPEC countries in the future. Consequently, they have a common interest in developing worldwide technology that can assure a reliable supply of oil and gas at a reasonable price in the years to come. Today, the service providers and equipment manufacturers are the leading developers of new technology; however they cooperate closely with the major oil and gas companies. The leading IOCs are still the most active in applying innovative concepts; however R&D investments among NOCs are growing. Also, smaller local companies are increasingly contributing to the technology development by leveraging their local knowledge. Still, it is likely that 90 percent of the R&D in the upstream activities of the oil and gas sector will be undertaken by OECD countries. Nevertheless, governments play a vital role in the development and implementation of

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<sup>161</sup> Financial Times (2006) *Statoil-Hydro merger foresees the future*, Financial Times, 19.12.06.

<sup>162</sup> UBS Investment Research (2006). *Oil Companies, Major Global Analyzer*, UBS Limited.

technologies, and in encouraging continued cooperation between the technology developers in OECD countries and the major resource holders. This is important to build a bridge between the global oil industry and the governments of both OECD and non-OECD countries to protect the interests of all stakeholders, and promote a stable technological environment<sup>163</sup>.

#### Necessary investment in infrastructure

Due to increased demand, the transportation of oil and gas around the world is expected to increase enormously. This will demand major investments in the production and distribution capacity and require more cost effective technologies. Due to the uneven geographical distribution of oil, it has for many years been traded and transported all around the world. Trade of gas on the other hand, has traditionally been more regional as it is much more difficult and costly to transport. Nevertheless, as the largest share of increased demand for gas comes from China and India and other emerging economies, it will have to be transported in greater volumes and over larger distances. Consequently, new technology is needed to provide more cost-effective solutions. Infrastructure for long-distance sea transport in the form of liquefied natural gas (LNG) has been around for a while. However, it has mainly been implemented in South Korea and Japan, where they lack the resources themselves and have been dependent on importing. However LNG value chains are expected to become the new solution for transporting gas all around the world<sup>164</sup>. Accordingly, substantial investments in the infrastructure of LNG are needed to secure the future supplies, mainly in developing countries<sup>165</sup>. This has implications for oil companies in the developed part of the world that have not yet had to deal with this issue as the resources have been so close to the market. Nevertheless, oil companies have to adapt to the changes in the environment, and many are currently undertaking investments in LNG infrastructure.

#### Security and safety

As oil and gas assets often are located in remote places, they are vulnerable to potential terrorist attacks. Hence, there is a need to implement more traditional access control and

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<sup>163</sup> IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future*, available at <[http://www.iea.org/Textbase/publications/free\\_new\\_Desc.asp?PUBS\\_ID=1568](http://www.iea.org/Textbase/publications/free_new_Desc.asp?PUBS_ID=1568)>, 10.03.07

<sup>164</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>165</sup> IEA, (Undated). *30 Key Energy Trends in the IEA & Worldwide*, available at <[http://www.iea.org/textbase/nppdf/free/2005/energy\\_trends.pdf](http://www.iea.org/textbase/nppdf/free/2005/energy_trends.pdf)> , 20.04.07

security measures on more sites. Another aspect of safety requiring technological development is resistance to natural hazards to minimize damages to the oil production. The recent hurricane Katrina in the US is a good illustration of how devastating effect such a natural disaster can have on the oil production and hence the global supply. However, this is an area where government support is critical, as it requires skills and expertise that are often to be found within government institutions. Nevertheless, even if such threats are generally beyond the control of private companies, joint efforts by industry and governments are needed to create a more secure and safe technological environment for the oil and gas industry<sup>166</sup>.

## ENVIRONMENTAL ENVIRONMENT

Environmental matters refer to issues concerning the protection of the environment. The most important elements for the oil and gas industry are efforts to reduce the emission of greenhouse gases and the development of renewable sources of energy.

### Increasing pressure for being environmentally friendly

Oil and gas exploration and production have the potential to cause severe damage to the environment. Moreover, increased energy consumption has resulted in larger emissions of greenhouse gases, which fuels global warming. Hence there is increasing concern to protect the environment, and oil and gas companies are under the pressure to be environmentally committed. Pressures come from various stakeholders such as environmental and human rights activists, but also banks and insurance companies, who are concerned with avoiding the risks and costs of potential environmental lawsuits<sup>167</sup>. The most challenging areas of environmental damages are the CO<sub>2</sub> emissions from production, discharges to water, solid and other wastes, and contamination of land and groundwater. The industry actors are well aware of these challenges and efforts are put in place in developing new technologies to address these issues. The oil and gas companies focus on reducing greenhouse emission from their operations through the development and implementation of advanced technologies that are not only cleaner, but also energy saving. Specific company activities include energy efficiency,

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<sup>166</sup> IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future*, available at <[http://www.iea.org/Textbase/publications/free\\_new\\_Desc.asp?PUBS\\_ID=1568](http://www.iea.org/Textbase/publications/free_new_Desc.asp?PUBS_ID=1568)>, 10.03.07

<sup>167</sup> Wawryk, A. S., (2003). *International Environmental Standards in the Oil Industry: Improving the Operations of Transnational Oil Companies in Emerging Economies*, available at <[http://www.gasandoil.com/ogel/samples/freearticles/roundup\\_09.htm](http://www.gasandoil.com/ogel/samples/freearticles/roundup_09.htm)>, 30.03.07

development of renewable sources of energy, and capturing and storing of CO<sub>2</sub>. Further research on fuel cell technology and advanced fuels, the reduction and elimination of venting and flaring and enhanced use of natural gas are other efforts that are put in place<sup>168</sup>. Environmental sensitivity is however, still not fully embedded in every aspect of oil and gas production. Hence, this is an area requiring continuing partnerships between the public, governments, environmental organizations and the industry for further progress.

## LEGAL ENVIRONMENT

Legal forces refer to the regulations and policies that governments impose on oil and gas companies. These can either take the form of barriers to trade or international laws concerning environmental standards and the protection of human rights. Moreover, an oil company must adapt to the local competition laws and the licensing rules in the countries it operates.

### Barriers to trade

There are very few visible barriers to trade in the industry and oil and gas is in theory traded freely across borders. Nonetheless, there are several hidden barriers and distortions to trade, often imposed by governments to protect their indigenous energy industries. National protectionism is a large obstacle to trade, and is often the case when one or more companies in that particular industry is profitable and provides regular incomes in the form of dividends to state budgets. Such hidden barriers are usually covered up as environmental taxes or subsidies on certain products that needs protection<sup>169</sup>. Consequently, the barriers will differ largely between countries.

### International laws and regulations on environmental standards

Traditionally, the regulation of resource exploitation has been the responsibility of local governments and international standards and treaties have been limited. This comes historically from the view that the regulation of onshore resource exploitation falls within the

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<sup>168</sup> IPIECA & OPG, (2002). *The oil and gas industry from Rio to Johannesburg and beyond. Contributing to sustainable development*, available at <<http://www.ipieca.org/downloads/WSSD.pdf>>, 30.03.07.

<sup>169</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

domestic jurisdiction of states. Thus, the standards, guidelines and best operating practices developed by oil industry associations and nongovernmental and intergovernmental organizations (NGOs and IGOs) constitute the major efforts to achieve uniform standards and operating practices across the globe. In the absence of adequate and enforced environmental laws in emerging economies, there are strong pressures for oil companies to voluntarily adopt “best practices” in emerging economies. These refer to environmental practices that can reduce the negative impacts of oil exploration and production. Moreover, governments themselves may require the execution of good environmental practices as a condition for granting development approval, even if these practices are not required by legislation. Even so, efforts are being made to implement more international standards. The requirement to limit the countries’ emissions of CO<sub>2</sub> by 20 percent by 2020, as determined by the Kyoto Protocol has forced some countries to cut their demand for oil. Also, current non-binding standards and guidelines have the potential to be transformed into enforced laws in the future<sup>170</sup>.

#### International laws on human rights

As the oil industry is a highly lucrative industry, there are unfortunately several incidents of violation of human rights. The lack of laws in this area makes it very difficult for oil companies to operate in countries where this takes place. This is especially true in the African oil producing countries, where oil production can cause devastating damage to the environment and take away the source of income for the people living there. Moreover, the wealth generated from oil in these areas is often used to fund military activities and provide income for the civilian elite. Hence oil companies have a responsibility to compensate the people living in an area where production of oil takes place for the damage incurred. Ideally, oil companies should only produce in countries where the oil revenues are spent by democratically elected and transparent political institutions<sup>171</sup>. However, as there are no uniform laws on human rights principles and practices, it requires oil companies to be

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<sup>170</sup> Wawryk, A. S., (2003). *International Environmental Standards in the Oil Industry: Improving the Operations of Transnational Oil Companies in Emerging Economies*, available at <[http://www.gasandoil.com/ogel/samples/freearticles/roundup\\_09.htm](http://www.gasandoil.com/ogel/samples/freearticles/roundup_09.htm)>.. 30.03.07

<sup>171</sup> Human Rights Watch, *International law*, available at <<http://www.hrw.org/reports/1999/nigeria/Nigew991-11.htm>>, 05.05.07.

ethically and socially committed, and stay out of the countries, where serious violations of human rights occur<sup>172</sup>.

## Competition law

Competition in the energy sector, particularly in the petroleum industry, is vitally important to the health of the world's economies. Antitrust enforcement has an important role to play in preserving competition in the oil industry and protecting the consumer. Consumers have experienced significant price increases in gasoline and home heating oil in the past year, and domestic refineries have had to carry a large increase in the price of crude oil. The antitrust enforcement authorities' responsibility is to prevent anticompetitive behaviour and collusive activities. The goal is to prevent the activities that are likely to notably reduce competition, and hence create higher prices. Antitrust enforcement authorities have in recent years been particularly active in investigating petroleum mergers due to the ongoing trend of consolidation and concentration in this industry. The anti-trust authorities such as the SEC in the US and the European Commission in the EU are perhaps the most significant barriers to large-scale mergers as they prevent companies from abusing their dominant position. Further, antitrust authorities have looked into whether OPEC and its members could be liable under antitrust laws. The oil industry is unique among commercially important global industries as a large share of the petroleum reserves is owned and regulated by sovereign nation-states. These states regard crude oil as their primary and perhaps only natural resource and want tight control over how that resource is exploited. As the anti-trust laws that are applicable to domestic and foreign private companies cannot be enforced on these sovereign nations, it is extremely difficult to apply competitive principles in the global oil industry. Hence no country's anti-trust regulation authorities have the power to make a final decision to antitrust issues taken under sovereign capacity<sup>173</sup>.

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<sup>172</sup> Wawryk, A. S., (2003). *International Environmental Standards in the Oil Industry: Improving the Operations of Transnational Oil Companies in Emerging Economies*, available at <[http://www.gasandoil.com/ogel/samples/freearticles/roundup\\_09.htm](http://www.gasandoil.com/ogel/samples/freearticles/roundup_09.htm)>, 30.03.07

<sup>173</sup> Parker, R. G., (2000). *Solutions to Competitive Problems in the Oil Industry*, available at <<http://www.ftc.gov/os/2000/03/opectestimony.htm>>, 24.05.07



## Licensing rules

Licensing involves the process of governments identifying the potential investment opportunities in their national territory, and their offering to the qualified oil companies through a bidding process. The term licensing in this context refers to the grant of a title or right to explore and produce oil in the particular territory. The process of granting oil and gas licenses varies across countries, particularly between the OECD countries and non-OECD countries. In the OECD areas, licensing usually involves a formal system with transparent criteria, while in other areas there are more informal systems and less specific conditions for licensing<sup>174</sup>. Nevertheless, it is unlikely that one company gets a 100 percent of a license in a production field, and the rules of the bidding process differ between countries. In countries such as Angola and Nigeria, the government would typically put together a consortium of various companies, in which the companies bid for a share of the percentage made available to foreign firms. In Russia, the governments have an auction process, where the highest bidder for a share of the license sets the price terms for the remaining shares. On the other hand, in Norway, the government seeks to put together the group of companies themselves, and in countries such as the US Gulf of Mexico, the bidding process is open to full competition. This means that a firm can, in theory bid for 100 percent of the license, although this is unlikely as there are large costs and risk involved in these projects<sup>175</sup>. Therefore, oil companies have to adapt to whatever licensing system prevail in the particular area of interest.

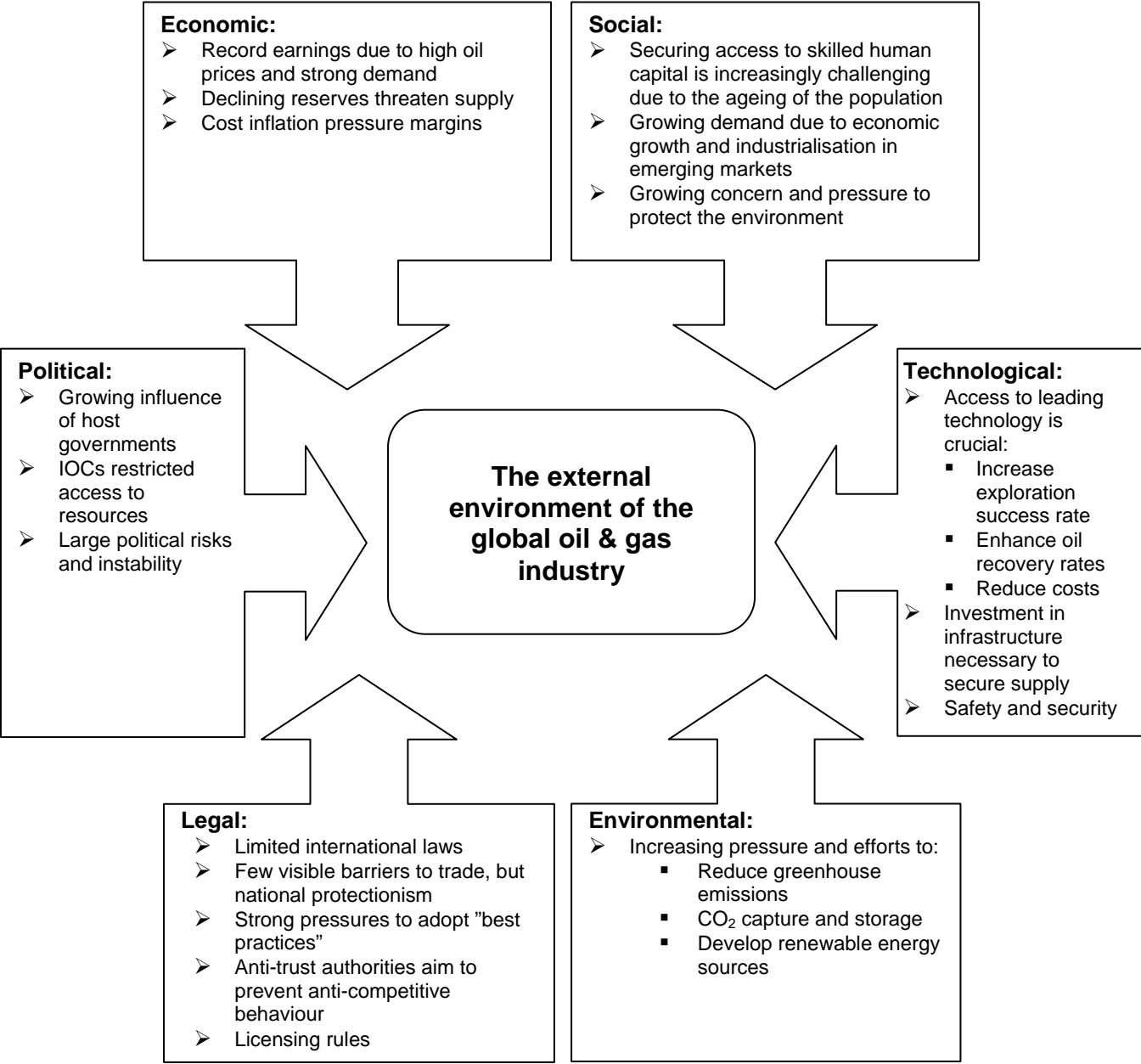
Below is a summary of the main forces and drivers in the external environment of the global oil and gas industry. It is important to remember that these forces constantly change, and hence companies operating in the industry must adapt accordingly.

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<sup>174</sup> Bunter, M. (2003). *A new approach to petroleum licensing*, Oil, Gas & Energy Law Intelligence, Volume 1, issue # 01, available at <[http://www.gasandoil.com/ogel/samples/freearticles/roundup\\_15.htm](http://www.gasandoil.com/ogel/samples/freearticles/roundup_15.htm)>, 17.06.07.

<sup>175</sup> Nunn, D. Senior Vice President, Portfolio Strategy, Norsk Hydro. Personal interview, 20.05.07.

**Figure 13: Summary of the main drivers of change within the industry**



## CHAPTER 2: PORTER'S FIVE FORCES FRAMEWORK

In order to determine the degree of rivalry in the oil industry, we will use Porter's five forces framework, and analyse the strength of the forces shaping the industry. As this framework takes into account the competition among customers and suppliers as well as corporate rivals, it is also useful for analysing the change and the structure of the global oil industry, and to observe which of the forces that are most influential today. Moreover, the analysis aims to identify the relevant industry opportunities and threats, which enables firms to match these with their resources and capabilities, and hence gain a competitive advantage.

### THREAT OF NEW ENTRANTS

In order to evaluate the threat of new entrants, it is important to distinguish between the threat from traditional integrated oil companies (IOCs), the independents, the service and equipment suppliers and the NOCs.

The oil industry is highly attractive due to the profitability of the firms in operation. Nevertheless, there are significant entry barriers, which make it difficult for new firms to enter this industry. Firstly, due to large initial capital investments in specialised equipment and technology very few companies can afford to enter this industry. Moreover, as such investments often involve sunk costs that are difficult to retrieve if the business fails, entry is very risky. Hence, the economies of scale needed to cover the initial costs and remain profitable are substantial, which reduces the threat of new entrants. Another barrier to entry is the large amount of accumulated working capital necessary to engage in large and costly projects. Hence, it will be difficult for the new entrants to match these requirements instantly<sup>176</sup>. Furthermore, incumbent oil companies also have established networks of suppliers and distributors and have over time developed technological capabilities which are difficult for newcomers to get access to. Moreover, as access to resources is dependent on government's licenses for exploration and extraction, existing firms in the industry are struggling to gain access to new resources, and thus this is even more challenging for new

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<sup>176</sup> Investopedia. *The Industry handbook-Oil Services Industry*, available at <[http://www.investopedia.com/features/industryhandbook/oil\\_services.asp](http://www.investopedia.com/features/industryhandbook/oil_services.asp)>, 15.04.07

entrants. Also, incumbent firms will have an advantage over new players as they often already have established relationships with host governments and can benefit from a steep learning curve and proven track record<sup>177</sup>. All these factors suggest that it is difficult for new companies to enter the industry as they face very high entry barriers. Consequently, we conclude that the threat of new integrated oil companies is rather low.

Nevertheless, the structure of the industry is changing, and hence the traditional IOCs are increasingly facing new competition from independent oil companies and service providers. The independents are currently increasing their market share as they are becoming preferred partners for the national resource holders. As they normally focus on niche segments they also have lower capital requirements to start production, and do not need to produce at the same level to achieve economies of scale. More importantly, the companies supplying the integrated oil companies with services and equipment are currently vertically integrating forward and have started to compete directly with the integrated oil companies. These suppliers face lower entry barriers, as they already have much of the equipment in place and accumulated capital to invest with. Moreover, they are seen as valuable partners to the NOCs as they can offer the same technology and equipment as traditional oil companies, without necessarily interfering with their other business areas. These factors facilitate the entry of both independents and suppliers as the necessary investments and risks are limited. Consequently, the majority of new entrants on the market today competing with the integrated oil companies are either service suppliers or independent oil companies focusing on niche segments<sup>178</sup>. Hence, we conclude that the threat of entrants with regards to suppliers and independents are relatively high as they face lower entry barriers than the traditional integrated oil companies.

Additionally, a number of NOCs, especially from emerging markets are currently expanding their operations into international territory, and hence constitute a threat to the IOCs. These companies seek to secure access to required energy sources as part of their efforts to meet their domestic energy requirements. The NOCs that have been able to accumulate large amounts of capital due to tight resource control in recent years, have proved to be willing to pay more than international players for access to new reserves. Also, the emerging market companies introduce a new type of competition as they can use their large abundance of cheap

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<sup>177</sup> Kolodziej, A., and Wojciech, N. (2006). *M&A as a way to create value – case of Norsk Hydro ASA*, Master thesis, NHH.

<sup>178</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Personal interview*, 05.06.07.

labour to build up the infrastructure in the countries they operate in and hence can produce more cheaply than their Western partners. As these companies also face lower barriers to entry, the threat of entry of such companies are increasing.

To conclude, the threat of entry from traditional integrated oil companies is rather low as they face high barriers to entry. On the other hand there is increasing threat of new entrants from the independents, service suppliers, NOCs and emerging market companies. Therefore, we suggest that the threat of new entrants is relatively strong and is expected to increase in the near future with the emergence of the new players in the industry who are able to compete on different terms.

## THREAT OF SUBSTITUTES

Substitutes for oil in general comprise coal, nuclear energy, hydrogen, natural gas and renewable energy sources such as biomass, hydropower, tidal power, wind power and solar power. It is however important to take into consideration that oil has multiple usages, from petrol used in the running of vehicles, to be used for electricity and the production of materials. Hence, none of today's available substitutes will completely replace oil in all its multiple usages. Nonetheless, since oil is a non-renewable resource, large investments are being made to develop alternatives that can substitute oil to a significant degree in the future.

Coal is an important energy source due to its availability, secure supply and competitiveness and will continue to play a key role in the world energy mix. Coal will meet 22 percent of global energy needs by 2030, essentially the same as today. The electricity sector will be responsible for over 95 percent of the growth in demand, as coal remains the leading fuel for power generation. Coal demand will increase the most in developing Asian countries, as it is the fastest way for these countries to industrialise. China and India alone will be responsible for 68 percent of the increase in demand to 2030. Coal is however seen as a weak substitute to oil as it leads to high CO<sub>2</sub> emissions and is inefficient in the production of gasoline for vehicles<sup>179</sup>.

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<sup>179</sup> IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07

Nuclear power can deliver energy without adding to greenhouse emission in the process, but it has several drawbacks as it is believed to be dangerous and there is yet no safe way to dispose nuclear waste. China, which today is dependent on coal, is developing long-term nuclear power plants programs due to the increased need for energy and restrictions on CO<sub>2</sub> emissions. However, such changes are time consuming and will not heavily influence the demand for oil in the near future<sup>180</sup>.

Hydrogen produces electricity through power cells, which convert hydrogen and oxygen into water. As it is a constituent of water, it is non-polluting and in effect inexhaustible. Hence, hydrogen is anticipated to be the fuel of the future. However, it is not a heavy substitution for oil as it is difficult to store and transport, and requires large amounts of electricity from water or fossil fuels<sup>181</sup>.

Natural gas is a cleaner and more environmentally friendly source of energy, and it is the closest substitute of oil and gasoline with regards to the transportation industry. In recent years, technology has allowed for the production of natural gas vehicles (NGVs), particularly for fuel intensive vehicles such as taxis and public buses. However, although there are certain disadvantages such as less trunk space, higher initial costs, and lack of refuelling infrastructure it will probably be applied to all types of vehicles in the near future<sup>182</sup>. Countries that already have natural-gas distribution grids can introduce it as a vehicle fuel relatively easily, but nations without such infrastructures will find them very costly to establish<sup>183</sup>. There are also substantial switching costs involved in changing cars for consumers. Nonetheless, the consumption of natural gas worldwide is expected to double by 2030, driven mainly by power generation. Gas reserves are likely to outlast oil and can easily meet the projected increase in global demand<sup>184</sup>. However, although natural gas can substitute certain usage areas of oil it does not pose a strong threat within the next 15-20 years.

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<sup>180</sup> Kolodziej, A., and Wojciech, N. (2006). *M&A as a way to create value – case of Norsk Hydro ASA*, Master thesis, NHH.

<sup>181</sup> IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07

<sup>182</sup> NGVAMERICA, *Natural gas for Transportation*, available at <[www.ngvc.com](http://www.ngvc.com)>, 25.05.07.

<sup>183</sup> BBC News, (2004). *What to use when the oil runs out*, available at <<http://news.bbc.co.uk/1/hi/sci/tech/3623675.stm>>, 20.05.07.

<sup>184</sup> IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07.

The development of renewable energy sources as a substitute to oil is promising, but however not expected to grow significantly, unless substantial governmental efforts or technological breakthroughs are put in place. A new report published by the IEA reveals that efforts made to develop sources of renewable energy actually has declined in the recent years, compared to investments being made in the 1980's. Renewable energy accounted for around 13 percent of the world's total primary energy supply in 2003. Unless efforts are put in place, the supply of renewable energy will only reach a level of 14 percent by 2030<sup>185</sup>. Biomass is by far the largest renewable energy source and refers to biological material (plant and animal waste), which can be used as bio fuel or for industrial production<sup>186</sup>. Over two-thirds of biomass is used for cooking and heating in developing countries. Hydropower refers to the capture of the energy of moving water and is the second-largest renewable source<sup>187</sup>. It is non-polluting, but only works where there is available running water. Wind power is projected to be the second-largest source of renewable electricity after hydroelectricity in 2030, while solar, tide and wave energy each accounts for only a small part of global energy demand<sup>188</sup>. Although, potentially promising, these renewable sources of energy are expensive and inefficient to use, and hence are not expected to substitute oil in the near future.

Despite efforts made to develop substitutes for oil, it is projected that the demand for oil and gas will continue to grow. Oil is expected to continue providing more than 90 percent of transport vehicles' energy requirements up till at least 2030<sup>189</sup>. Moreover, even if strict policies to reduce the emissions of CO<sub>2</sub> are implemented, the projected growth in oil and gas consumption remains significant.

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<sup>185</sup> IEA (2006). *Renewables in Global Energy Supply-an IEA Fact Sheet*, available at <<http://www.solarwaerme.at/docs/174.pdf>>, 05.05.07.

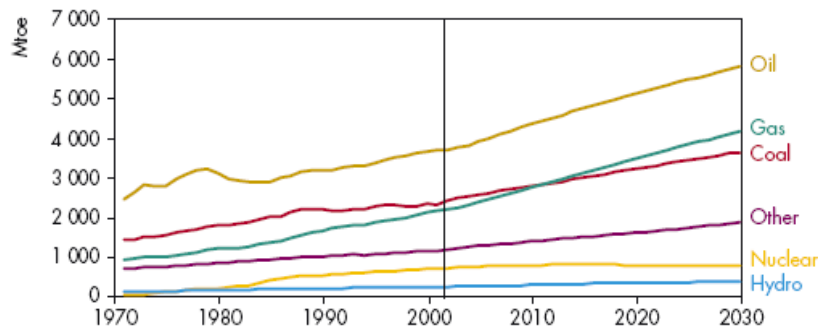
<sup>186</sup> Answers.com, Biomass, available at, <<http://www.answers.com/topic/biomass>>, 20.05.07

<sup>187</sup> Answers.com, Hydropower, available at <<http://www.answers.com/topic/hydropower-1>>, 20.05.07.

<sup>188</sup> IEA (2006). *Renewables in Global Energy Supply-an IEA Fact Sheet*, available at <<http://www.solarwaerme.at/docs/174.pdf>>, 05.05.07.

<sup>189</sup> IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07.

**Figure 14: World projected energy demand over time<sup>190</sup>**



\*"Other" refers to renewable energy (biomass, wind and solar power etc)

As can be seen from the figure above, conventional oil and gas is expected to dominate supply until 2030, even though the use of non-conventional sources is likely to grow significantly<sup>191</sup>. The important issue is however, not when the conventional oil production peak, but how much it will cost to make non-conventional hydrocarbons available or to increase the recovery rates of conventional hydrocarbons. This issue will determine when and to what extent the other sources of energy like coal, nuclear or renewable energies will substitute for oil in the role they play today<sup>192</sup>. Nonetheless, as the substitutes available today are not superior in quality and function, and require a process that is very costly and in most cases dependent on governmental policies or efforts, it will take many years to fully develop viable substitutes. Moreover, switching costs to use substitutes are high, as it requires substantial time and investments for consumers to change their primary source of energy. Hence, we conclude that the threat of substitutes is currently rather low, but will become a threat in the future.

## BARGAINING POWER OF BUYERS

As most of the oil producers also are integrated downstream through owning petrol stations, we define the buyers to be the final consumers of oil and gas. This market is highly fragmented as there are millions of consumers, and they only purchase a small fraction of the total available market. Therefore, they have very limited bargaining power. Moreover, as oil

<sup>190</sup> IEA (2004). *World Energy Outlook*, available at <http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>, 01.05.07.

<sup>191</sup> IEA (2004). *World Energy Outlook*, available at <http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>, 01.05.07.

<sup>192</sup> IEA (2006). *Renewables in Global Energy Supply-an IEA Fact Sheet*, available at <http://www.solarwaerme.at/docs/174.pdf>, 05.05.07.



and gas is a necessity as a source of energy for electricity and transport, buyers have no influence on prices and must accept the prices in the market at any time. Hence, when the prices are high, it is the end consumers who suffer the most. The oil prices have in recent years reached peak levels and this is mainly due to the increased demand in combination with restricted supply. Demand is influenced by many factors such as the availability of energy substitutes, economic growth and weather conditions. Hence high oil prices in recent years have been largely influenced by the increased demand from emerging economies that are industrialising such as China and India<sup>193</sup>, and the steady demand for fuel in traditional markets<sup>194</sup>. This trend is likely to continue, as it will be difficult to substitute oil with other sources of energy for transportation fuel in the near future and this also involves large switching costs for the buyers<sup>195</sup>. Moreover, due to geopolitical problems in the Middle East and Russia together with the increasing nationalisation of resources, the global supply of crude oil has been restricted. Hence, this combination of excess demand over supply has contributed to substantially high prices in recent years<sup>196</sup>, and this places buyers in a weak position. Furthermore, there is no threat that buyers will vertically integrate backwards due to the fragmentation of the buyers and their inability to coordinate their actions. Due to all the above factors, we conclude that buyers in the industry are left with little bargaining power.

## BARGAINING POWER OF SUPPLIERS

For the purpose of this paper, we define the main suppliers to be the resource holders supplying the oil producers with hydrocarbon resources. We also consider the suppliers providing the oil companies with services and equipment. Our aim is to determine the bargaining power of the suppliers relative to the integrated oil-producing companies in the industry.

Earlier, when oil prices and demand were lower, IOCs had the upper hand when negotiating with governments controlling access to reserves. However, today countries holding vast reserves have gained stronger bargaining power with international oil companies that want to

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<sup>193</sup> UBS Investment Research (2006). *Oil Companies, Major- Global Analyzer*, UBS Limited, 05.12.06.

<sup>194</sup> Datamonitor (2006) *Global Oil & Gas, Industry profile*, available at <www.datamonitor.com>, 25.05.07.

<sup>195</sup> UBS Investment Research (2006). *Oil Companies, Major- Global Analyzer*, UBS Limited, 05.12.06.

<sup>196</sup> Datamonitor (2006) *Global Oil & Gas, Industry profile*, available at <www.datamonitor.com>, 25.05.07.

operate on their territories<sup>197</sup>. Consequently, increased nationalisation of petroleum resources has made the national resource holders very powerful. Today they have complete control over the licensing and production of their natural resources. Hence, this forces the international majors and independent oil companies to cooperate with the national resource holders to improve or maintain their reserves and production levels. Moreover, there is a credible threat that resource holders may vertically integrate forward through participation in the production and sales of oil. This has further increased the bargaining power of suppliers of the natural resources. However, as the majority of the petroleum reserves are discovered in the less developed regions of the world, national resource holders lack the proper infrastructure and technology to operate the complex exploration projects on their own, and thus depend on the IOCs, the service suppliers and the independents to transfer their knowledge and invest in R&D. Yet, the resource holders will have the strongest bargaining power in deals as they control the access to the resources and hence demand better services for lower prices. Further, the tendency of producing countries to prefer the entry of independents that has no alternative source of oil provides the resource holders with the bargaining power to exploit better terms in their concessions<sup>198</sup>. These factors will threaten the profit margins of the oil companies in the industry and intensify competition.

In addition, the bargaining power of suppliers is further enhanced by the increased demand for energy from emerging economies like China and India, which is likely to sustain the oil and gas price at a high level. Moreover, with fewer opportunities to discover new reserves outside of the OPEC countries, OPEC will surely become more powerful in controlling the supply to ensure a high oil price and hence profits for their members. Also, the switching costs involved in changing suppliers are high as the extraction process requires large investments in transportation and technology customised for a particular area. This further strengthens the bargaining power of resource holders, as they know that the oil companies are committed to stay in a place where they have invested heavily. To conclude, we believe that the resource holders in the industry have strong bargaining power and their position might be strengthened even further in the years to come as there will be increased competition for scarce resources.

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<sup>197</sup> Washington Post (2005). *National Oil Firms Take Bigger Role Governments Hold Most of World's Reserves*, available at <<http://www.washingtonpost.com/wpdyn/content/article/2005/08/02/AR2005080201978.html>>, 15.06.07.

<sup>198</sup> Kolodziej, A., and Wojciech, N. (2006). *M&A as a way to create value – case of Norsk Hydro ASA*, Master thesis, NHH.

There are today a large number of service and equipment suppliers in the industry, indicating that there is strong competition among suppliers which weakens their bargaining power. Furthermore as the integrated oil companies often buy large orders, suppliers need to offer good terms on their products and services in order not to lose a key customer. This implies that the suppliers in the industry have limited bargaining power over their customers. However, on the other hand as suppliers are the main developers of the highly-specialised equipment and advanced technology that oil companies use, there is a threat that they will vertically integrate forward. This means that the suppliers will be able to perform the same task as the oil companies, with the exception of market access, and hence become a rival to the integrated oil companies. There are several examples of this occurring in the industry today and, consequently these suppliers can become valuable partners for the resource holders as they can provide them with the technological competence without necessarily interfering with their other business areas<sup>199</sup>. This enhances the bargaining power of suppliers and increases the rivalry in the industry. As a result, although the bargaining power of services and equipment suppliers has up until today been rather limited, there is a strong trend towards stronger bargaining power in the near future.

## DEGREE OF RIVALRY

The strength of the previous forces determines the degree of rivalry in the international petroleum industry. As the industry is considered to be highly attractive and has a large number of players, this implies that the industry is competitive. The industry is characterised by a diversity of players, the main competitors in the industry today are the international oil companies (IOCs), the national oil companies (NOCs), and the independents. However, the power structure of the industry has changed throughout the years. Traditionally, the majority of reserves were controlled by the IOCs and little was maintained by the national governments. The reason for this was that many of resource-holding countries did not have the money or technology to develop the infrastructure so they were dependent on the IOCs to produce the oil. However, today they have accumulated large cash deposits and have nationalised most of their oil fields to regain control. As the resource holders prefer domestic ownership of the resources, the power has shifted from the IOCs to the NOCs<sup>200</sup>.

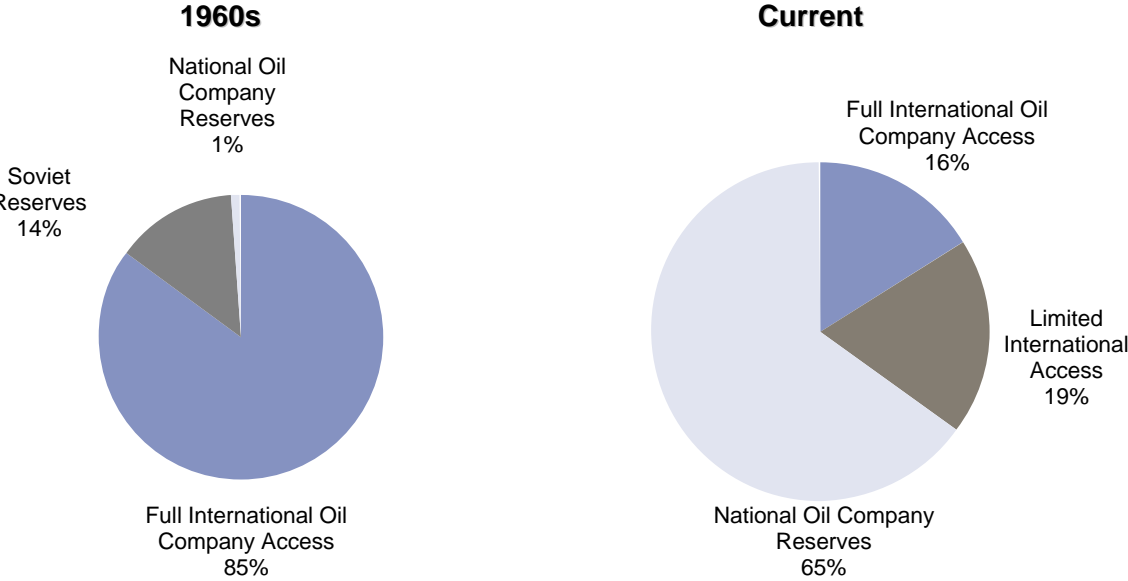
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<sup>199</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>200</sup> Kolodziej, A., and Wojciech, N. (2006). *M&A as a way to create value – case of Norsk Hydro ASA*, Master thesis, NHH.

Consequently, NOCs benefit heavily from the support of their governments in bidding processes<sup>201</sup>. The IOCs still have extensive skills in technology development and access to large financial resources; however they only control a very small fraction of the world’s remaining oil and gas reserves<sup>202</sup>. The pie charts below illustrate how the control or access to reserves has changed from the 1960s and till today.

**Figure 15: Changes in the control and access to natural reserves (1960-)**<sup>203</sup>



As evident from this graph, the NOCs control around 65 percent of the proven reserves today, while the IOCs, the independents and new oil companies from emerging markets have to compete for the remaining 16 percent. This substantially intensifies the competition for the reserves that are still easily accessible. Moreover, although these companies still can transfer valuable technology to the NOCs, the terms for obtaining licenses and operator ships are becoming increasingly challenging and oil companies have to be attractive as a partner to host governments in order to get access. This implies a strong degree of rivalry.

According to UBS the best performers of the industry today, measured in terms of share price performance have been emerging market companies like Petrobras and Lukoil, and strong resource holders like Russia and Canada. The traditional IOCs on the other hand are

<sup>201</sup> Morgan Stanley (2006). *Oil & Gas Twilight Zone*, Morgan Stanley Research Europe, 21.07.06.  
<sup>202</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.  
<sup>203</sup> Nunn, D. W. *Restructuring Hydro – The StatoilHydro merger*, Presentation to The Conference Board Pensions Council, Oslo 10.05.2007.

struggling to maintain their production levels and have experienced low growth rates in recent years. Additionally, competitive threats have also arisen from NOCs of emerging markets such as China and India. Traditionally the integrated oil companies have been knowledge-driven, and resource ownership or access has been a product of that. Many of the emerging market companies on the other hand are resource-abundant, but lack the necessary knowledge and technology. Nonetheless, the quality gap is closing as the use of the oil service sector has made the technology more available. Moreover, by adopting and implementing industry best practices, emerging companies are becoming more similar to the western majors<sup>204</sup>. The Chinese oil companies, for instance are becoming more competitive as they apply a more comprehensive approach than Western companies. As they have access to a large and cheap labour force, they bring with them the necessary manpower to new locations to develop the infrastructure in the countries they explore for oil. This is their real competitive advantage which other oil companies are struggling to match<sup>205</sup>.

Although oil prices have been high in recent years, increasing cost inflation is eroding companies' margins. Moving forward, prices are expected to stabilize, leading to a slower industry growth<sup>206</sup>. Moreover, since there are high levels of fixed costs and high exit barriers this puts pressure on oil companies to stay in operation even though profits are decreasing. Lastly as oil is a commodity, there is low degree of product differentiation and in combination with low customer switching costs this intensifies the degree of rivalry<sup>207</sup>. As a result of these factors, we conclude that there is intense rivalry in the global oil and gas industry.

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<sup>204</sup> UBS Investment Research (2006). *Oil Companies, Major- Global Analyzer*, UBS Limited, 05.12.06.

<sup>205</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

<sup>206</sup> Datamonitor (2006) *Global Oil & Gas, Industry profile*, available at <[www.datamonitor.com](http://www.datamonitor.com)>, 25.05.07.

<sup>207</sup> Investopedia. *The Industry handbook-Oil Services Industry*, available at <[http://www.investopedia.com/features/industryhandbook/oil\\_services.asp](http://www.investopedia.com/features/industryhandbook/oil_services.asp)>, 15.04.07

**Figure 16: Summary of the most influential forces**

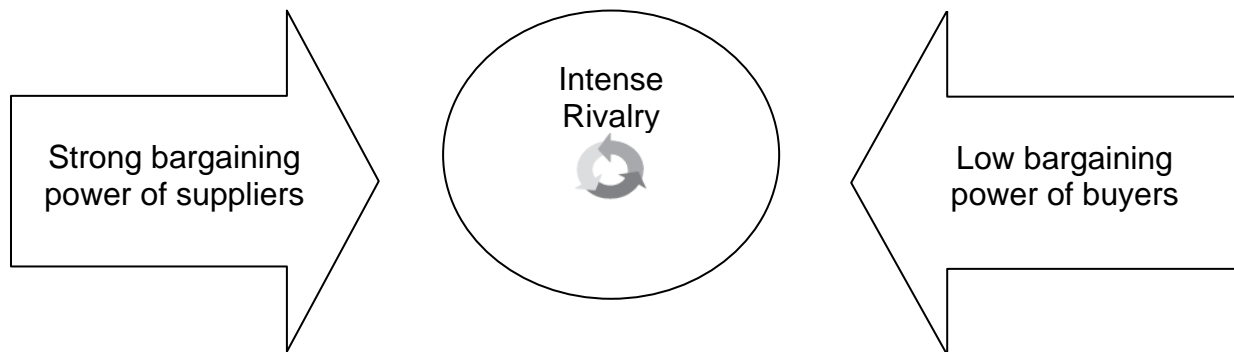
**Threat of new entry**

- Low threat from IOCs due to high entry barriers and restricted access to networks and resources
- Higher threat from independents, suppliers, and NOCs. Lower barriers to entry as they focus on niche segments, have lower start up costs and valuable technology.

Relatively strong threat of new entrants

**Degree of Rivalry:**

- The industry has always been competitive, however, the power balance has shifted
- As the reserves are depleting and the access increasingly controlled by NOCs, the competition for resources is intensifying
- Also, new competition from emerging markets and service and equipment suppliers intensifies the competition



**Supplier Power:**

- National resource holders are becoming increasingly powerful as they control the majority of the remaining resources
- IOCs have little power and are forced to cooperate closely with the resource holders
- Equipment and service providers are gaining a stronger foothold in the industry due to possession of leading technology
- Threat of forward integration
- OPEC is becoming more powerful

Low threat of Substitution

**Buyer Power:**

- Buyers have little power individually as they cannot influence prices
- Product is a necessity
- No threat of backward integration

**Threat of Substitutes:**

- Rather low as substitutes available are costly to develop and not superior in quality or function
- Switching costs are high

**CONCLUSION**

Porter's five forces framework has allowed us to determine the structure and power balance of the competition in the global oil and gas industry. The industry is characterised by relatively strong threat of new entrants, low threat of substitutes in the near future, strong bargaining power of suppliers and low bargaining power of buyers. This implies that there is strong

rivalry in the industry, which is likely to become even stronger in the near future with decreasing access to reserves and new players competing on different terms.

A question that arises is how this competitive situation affects Statoil. Statoil was established as fully state-owned company, and hence considered to be a NOC for many years. However, when the company was partly privatised in 2001 in combination with the decreasing reserves on the NCS, Statoil has moved more in the direction of an IOC. Today, Statoil seeks to increase its international presence even further and is competing on equal terms with the major international companies. Moving from a protected home market, Statoil has to consider how to deal with the strong competitive forces in the industry and how it can best compete to maximize its share of the profits. After all, it seems like the companies that are “stuck in the middle” between the natural abundant NOCs and the independents that are able to exploit profitable niches, may be those that will find the years ahead most difficult. Hence, it is vital that Statoil focuses on what they are strongest at and consider adapting its business model to better fit the challenges it faces in the global oil industry. In the next section we will look into whether Statoil has the right conditions in place to internationalise.

## CHAPTER 3: DUNNING'S OLI FRAMEWORK

As we have discussed in theory, this framework tries to explain why there is international production, where the production would take place and how multinational firms can earn better profits than national producers in the countries in which they operate.

In 2005, Statoil's international activities accounted for 16 percent of its total production. However, the company aims to reach an annual international growth of 2-4 percent from 2007-2010<sup>208</sup>. This is a major step for the company and will involve an extensive internationalisation plan. Moving from a protected home market, in which they are dominant to the international arena will be challenging. After all, Statoil has limited international experience and the competition abroad is fierce. Thus, this is a useful framework for explaining and analyzing Statoil's economic rationale for undertaking international production and the organizational issues that are related to its international activities. With this we aim to analyze the degree of Statoil's ownership, location and internalisation advantages.

### OWNERSHIP

Ownership advantages are crucial as they allow the foreign firms to overcome the advantages possessed by the incumbent firms, and then to compete effectively with them. According to Dunning, there are three main ownership advantages; standard ownership advantage, benefits of belonging to a large organization and benefits of being an MNE.

#### Standard ownership advantage

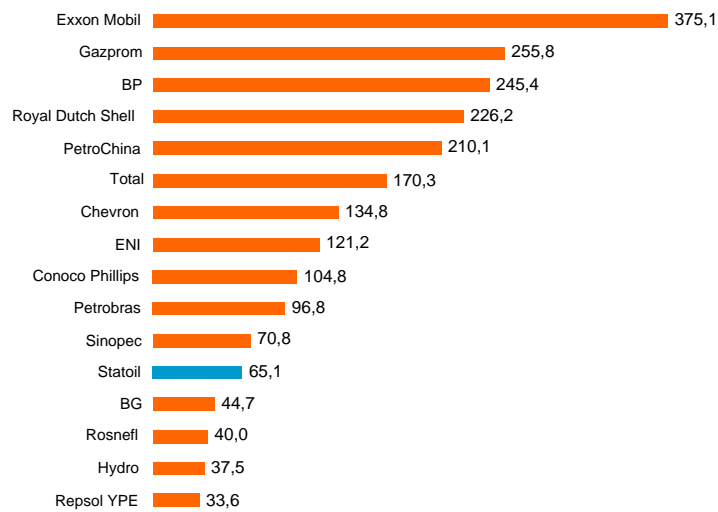
Statoil is the largest company in Norway and among the leading offshore operators in the world. However, as can be seen from the figure below, measured by market capitalization Statoil cannot compete in size with the largest integrated oil companies.

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<sup>208</sup> HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07.



**Figure 17: Integrated oil companies measured by market capitalization (USD 2006)** <sup>209</sup>



Nonetheless, Statoil has managed to combine the benefits of both an NOC and an IOC, in a way that many other companies in the same position have struggled with. Statoil has been able to take advantage of its extensive experience and dominant position in a large domestic resource base with the technology and growth strategy similar to larger IOCs<sup>210</sup>. Even if the state is the majority holder, with a 70.9 percent stake, the Norwegian government has not used Statoil as a direct foreign policy tool, changed its tax laws in order to meet its budget, or interfered too much with its management to serve its own interests. Conversely, with the state participation Statoil has been encouraged to develop leading technology and a return-focused mentality<sup>211</sup>. Although Statoil cannot be comparable in size with the major oil companies, the fact that it has features of an NOC and an IOC can be an important ownership advantage which the company can bring with it outside the Norwegian borders.

Moreover, our findings suggest that the accumulated know-how and expertise in technology based on experience in the North Sea is Statoil's main ownership advantage. This know-how in exploring technically challenging fields, like deep waters and arctic regions together with sophisticated techniques in increasing oil recovery rates will be an important asset for Statoil when expanding abroad. This is because many of the new fields to be developed are located in technically challenging areas in developing countries. Few countries, particularly in the

<sup>209</sup> Nunn, D. W. *Restructuring Hydro – The StatoilHydro merger*, Presentation to The Conference Board Pensions Council, Oslo 10.05.2007.

<sup>210</sup> Morgan Stanley (2006). *Oil & Gas, Statoil and Norsk Hydro propose merger*, Morgan Stanley Research Europe, 19.12.06.

<sup>211</sup> Morgan Stanley (2006). *Oil & Gas, Statoil and Norsk Hydro propose merger*, Morgan Stanley Research Europe, 19.12.06.

developing world, actually have the necessary capabilities and technology to recover these natural resources on their own<sup>212</sup>.

Moreover, Norwegian companies are considered by many to be less greedy and dominant on the international arena. This might potentially provide Statoil with an advantage in going after new contracts and establishing relationships with host governments, which is very important in today's industry. Nevertheless, it might be naïve to think that being Norwegian offers a competitive advantage, thus we emphasize on the fact that not being American or British might be more relevant. Furthermore, Statoil aims to be recognized as a socially and environmentally committed company, which it aspires to build up as an ownership advantage abroad<sup>213</sup>. The company is known for being at the forefront in developing leading ways of capturing and storing carbon dioxide sub-surface. This gas can be used for improved oil recovery, and simultaneously help to reduce climate change. Moreover, Statoil has initiated a comprehensive program to combat corruption and aims to support the local communities where it operates. However, unfortunate events in the past, such as its involvement in a corruption scandal in Iran a few years ago, seriously damaged its reputation. Despite this, it seems that the company has learned from its mistakes and is determined to correct this image. Together these efforts might provide Statoil with a solid reputation, which will be beneficial to the company when negotiating deals with host governments in the future. According to a study conducted by Goldman Sachs concerning social and environmental issues, Statoil positively stands out in several areas. Consequently, as can be illustrated in figure 18 we believe that this is an area, in which Statoil might enjoy an ownership advantage in the future.

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<sup>212</sup> Vatne, E. (2000). *Global markets-local competence? Internationalisation of the Norwegian petroleum industry*, Working paper 78/00, SNF-project No 4225; Norwegian petroleum industry abroad.

<sup>213</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

Figure 18: Goldman Sachs social and environmental study<sup>214</sup>

Company	Climate Change	Pollution	Human Rights	Management Diversity and Incentives	Investment in the Future	Workforce	Safety	Transparency and Vision
BP	23	3	11	20	6	22	21	14
RD/Shell	22	3	9	21	8	19	21	14
Statoil	18	7	11	18	5	19	18	13
ExxonMobil	13	3	8	18	8	23	23	12
Norsk Hydro	18	8	10	13	7	16	17	10
TOTAL	19	4	9	18	10	19	9	9
ChevronTexaco	14	3	10	20	8	19	13	8
BG	17	8	10	15	5	13	16	10
ENI	15	8	10	16	6	13	12	10
OMV	15	5	9	15	6	12	13	10
ConocoPhillips	12	6	9	20	7	11	8	11
Amerada Hess	14	5	10	15	2	11	11	11
Occidental	10	5	6	21	2	9	14	9
Marathon	5	3	6	20	2	15	17	7
Repsol	15	3	10	12	6	12	5	11
Petrobras	5	5	7	13	3	13	13	7
CNOOC	5	8	6	13	3	13	9	8
PetroChina	5	5	7	17	4	10	7	8
MOL	7	2	7	10	6	8	12	10
Sinopec	5	3	6	11	6	12	5	8
Yukos	7	4	7	10	2	7	5	5
Lukoil	5	4	6	12	2	8	5	4
CEPSA	5	2	5	13	2	9	5	4
<b>Average</b>	<b>11.9</b>	<b>4.7</b>	<b>8.2</b>	<b>15.7</b>	<b>5.0</b>	<b>13.6</b>	<b>12.1</b>	<b>9.3</b>
<b>Maximum</b>	<b>25</b>	<b>8</b>	<b>12</b>	<b>23</b>	<b>10</b>	<b>25</b>	<b>25</b>	<b>14</b>

Additionally, by owning assets both domestically and in foreign markets Statoil is better able to manage and coordinate cross-border activities and facilitate just-in-time delivery to various locations<sup>215</sup>. Another ownership advantage is Statoil's experience in establishing value chains for natural gas<sup>216</sup>. After all, the industry is threatened by delivery problems, and consequently many European countries are seeking to diversify their supplies of petroleum to improve the security of supply<sup>217</sup>. Statoil can use this threat to its advantage by seeking to develop its reputation as an ethical and trustworthy supplier of oil and gas.

#### Benefits derived from belonging to a large organisation

According to various industry reports, the size of companies is important in the international oil and gas sector. This can partly be explained by the belief that larger companies possess more financial, human, technological and operational strength and are in a better situation to pursue new growth opportunities. More, importantly governments in resource holding nations

<sup>214</sup> Ling, A. (2004). *Our experience in Energy: Social & Environmental Issues*, Goldman Sachs Investment Research. 16.06.04.

<sup>215</sup> Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

<sup>216</sup> Statoil's website, *Annual report 2006*, available at

<<http://www.statoil.com/INF/SVG03636.NSF?OpenDatabase&lang=en&app=2006year>>, 30.04.07

<sup>217</sup> HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07

usually prefer larger companies to operate on their fields as they can take on larger and more complex projects and often view them as being more successful<sup>218</sup>. The Sakhalin and Qatar LNG development projects may serve as examples of projects where the majors seem to have a competitive advantage due to their size<sup>219</sup>. The ability to diversify risk is another important size argument. There are two levels of risk; both project-specific and country-specific, and both are equally important when diversifying risk. Firstly, large companies are able to take on several large projects simultaneously and hence spread their risk across several projects as some might fail and others succeed. Secondly, by also spreading investment geographically in several countries, companies can overcome the country-specific risks<sup>220</sup>. Furthermore, size is important when you are an integrated oil and gas company, as you have to master the whole value chain<sup>221</sup>.

Nevertheless, others argue that the size effect of oil companies is overrated. According to Ramm, size in itself is not a determinant of success. He says that a company does not necessarily perform well due to its size, but rather grows large due to good performance<sup>222</sup>. We agree with this argument and believe that Statoil's success will be more dependent on how the organisation is built up and managed. Even though Statoil is not very large compared to other international majors, its size still allows it to take a certain degree of operational and financial risk. The company has access to a large pool of skilled labour and sufficient capital to keep up with the technological R&D. Moreover, the company achieves economies of scale (EOS) in value chains both for natural gas and oil. In oil the EOS is mostly in the midstream and downstream activities of the value chain as it produces in smaller scale while refining at a large scale. In natural gas the company typically benefits from EOS in processing and in transportation. In general, by belonging to a large organisation Statoil can gain EOS in purchasing as they have increased bargaining power over suppliers and can make better deals by for example coordinating steel orders for several projects at the same time<sup>223</sup>.

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<sup>218</sup> Wærness, E. Director of Group Planning and Analysis, Statoil. *Personal interview*, 30.01.07

<sup>219</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07 .

<sup>220</sup> Ramm, H. H. Independent petroleum consultant, *Telephone interview*, 07.06.07.

<sup>221</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07 .

<sup>222</sup> Ramm, H. H. Independent petroleum consultant, *Telephone interview*, 07.06.07.

<sup>223</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07 .

## Benefits of being an MNE

By dispersing international production and development portfolios, a company can exploit a broader global presence. By strengthening its position in several areas, Statoil can better take advantage of the different factor endowments various locations offer, such as better access to natural resources and human capital while benefiting from lower production costs, different tax policies and the like. Statoil has expressed that a geographical dispersion of its oil and gas production is strategically important for developing the company's reserves<sup>224</sup>. Additionally, Statoil has advantages when expanding into new markets as it can use the experience from its domestic market. By being an MNE Statoil can transfer technological knowledge to new business locations and take advantage of local knowledge about markets and competitors. This will also improve its position at home in competition with other multinational companies.

## LOCATION

To Statoil, the three most important criteria in entering new markets are the potential for growth, the competitive situation and the political and regulatory framework. Nonetheless, Statoil needs to look at the total picture that gives the highest profitability potential and rate the different projects accordingly<sup>225</sup>. It is expected that most of Statoil's production growth in the future will come from its international divisions, as most of the world's remaining reserves are located internationally. Moreover, the unit profitability of Statoil's international assets is three times higher than its domestic operations given the high tax levels on domestic production<sup>226</sup>. Upon entering new markets, Statoil conducts a comprehensive scenario analysis of factors like; the geological potential, the competitive situation and access requirements, the stability of the political regime, as well as implications of the geographical and cultural distance. These factors often involves tradeoffs, however, a combination of these will determine the attractiveness of the location.

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<sup>224</sup> IEA (2005). Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future.

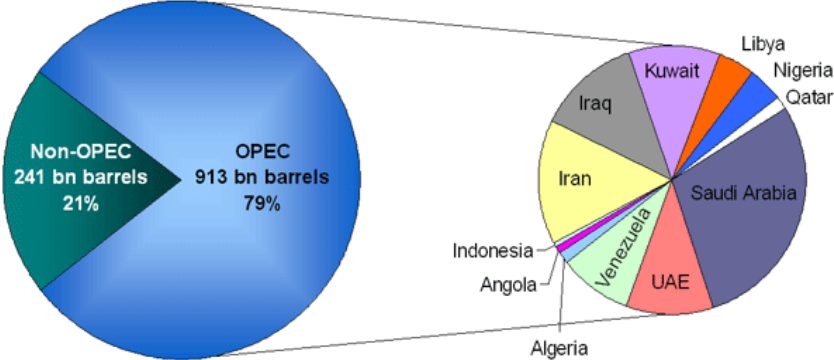
<sup>225</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07 .

<sup>226</sup> HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07

Geological Potential

As Statoil is mainly a natural resource-seeking firm, the choice of where to locate its operations is particularly tied to foreign locations where there is geological potential to develop oil and gas resources<sup>227</sup>. According to current estimates, more than three-quarters of the world’s oil reserves are located in OPEC countries. The majority of these reserves are located in Middle East countries like Iran, Iraq, Kuwait, Saudi Arabia and the United Arab Emirates<sup>228</sup>.

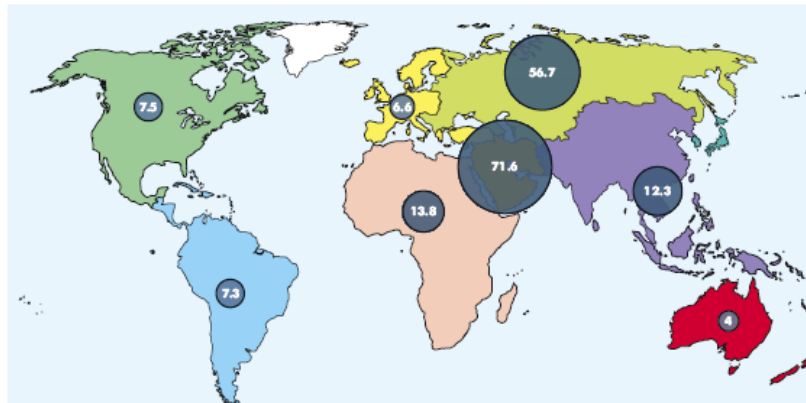
Figure 19: World oil reserves (2005)<sup>229</sup>



Conventional gas on the other hand is located primarily in Russia, the Former Soviet Union (FSU), and in Iran, Qatar and Saudi Arabia. These oil and gas resources would be easy and cheap for Statoil to extract, however, getting access is very challenging due to difficult political regimes. Nonetheless, even if the company is not given full access to these resources, Statoil can benefit from transferring the necessary technology and know-how related to reservoir management and recovery improvements to these areas<sup>230</sup>.

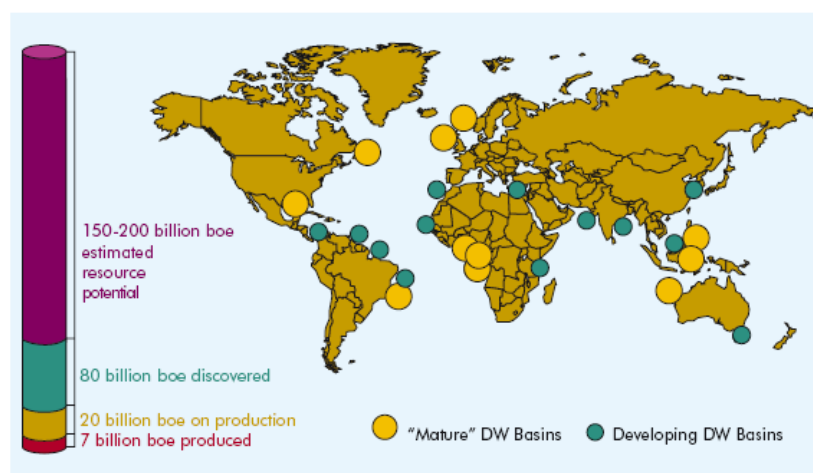
<sup>227</sup> Nunn, D. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.  
<sup>228</sup> OPEC (2005). OPEC’s share of World Crude Oil Reserves, available from <<http://www.opec.org/home/PowerPoint/Reserves/OPEC%20share.htm>>, 15.05.07  
<sup>229</sup> OPEC (2005). OPEC’s share of World Crude Oil Reserves, available from <<http://www.opec.org/home/PowerPoint/Reserves/OPEC%20share.htm>>, 15.05.07  
<sup>230</sup> IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07

**Figure 20: World proven reserves of natural gas (in trillion cubic metres)<sup>231</sup>:**



The limited access to conventional oil and gas resources also forces Statoil to look into other types of reservoirs such as deep- and arctic waters. Such environments are more easily accessible, as they are situated in the UK, Canada and Gulf of Mexico, however more technically challenging and costly to develop. Nevertheless, Statoil can take advantage of the situation, due to its possession of leading expertise in this field<sup>232</sup>. Actually, about one-fifth of the undiscovered conventional oil outside the Middle East is expected to be in offshore deepwater areas and another third in Arctic regions<sup>233</sup>. Consequently, taking advantage of its technological know-how can potentially provide Statoil with a competitive advantage in getting access to new reserves in these areas.

**Figure 21: Future global oil and gas deepwater potential<sup>234</sup>**



<sup>231</sup> IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07

<sup>232</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07

<sup>233</sup> IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future.*

<sup>234</sup> IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future.*

## Access requirements and competitive situation

The location choice is also largely dependent on the local requirements for getting access to the natural resources and Statoil's competitive situation. This will both influence the company's profitability potential and the necessary efforts to facilitate entry. It is relevant to distinguish between the OECD areas and the non-OECD areas.

In the OECD area oil companies that want to obtain licenses need to possess a set of transparent criteria determined by the resource holding state in order to be accepted. This is often related to the solidity of the organization and its competence level. Competence in this case refers to the ability of a company to deliver what it promises, within the time and budget and with the best technology. Geological and technical skills as well as financial strength are also critical factors in getting access to traditional regimes and projects. In these countries Statoil can benefit from the experience and technological competence they have developed in the North Sea for more than 30 years. Statoil documents its capabilities through its proven track record of completed projects and projects under development<sup>235</sup>.

In the non-OECD area, where the NOCs dominate, Statoil competes through the same capabilities as in the OECD area. However, access requirements may largely differ between locations and oil companies are required to act in a manner that suits the local country's culture, norms and legislation. National resource holders may prefer companies that offer development programs so that they over time can perform the task themselves. Thus, a company's track record and competence is important, together with the ability to complete projects on the agreed terms. Host governments also look at the whole package of what a company can offer, thus it is important that the government like the business model, and how the company communicates and stands out. Consequently, oil companies need to understand the petroleum policies in a country so that it can become a part of the host government's strategy. Statoil is very eager to take part in developing the infrastructure in the countries they operate. This also benefits them by securing the efficiency in the project development and operation phase. Nonetheless, this is a sensitive area as the line between development and what can be interpreted as corruption can sometimes be unclear. Hence, Statoil seeks to only get involved in development projects which benefit the exploration and production of oil<sup>236</sup>.

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<sup>235</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07

<sup>236</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07



## Political stability

Stable fiscal regimes and favourable taxation policies are other important factors for Statoil in determining where to locate its production. Today, around 80 percent of Statoil's production is located in OECD areas. Given the rise of resource nationalisation this gives the company's assets a greater degree of security. Then again, the disadvantage is that existing fields in these areas are maturing. Unfortunately, the largest remaining reserves are located in risky and politically instable environments<sup>237</sup>. As many of the new projects in non-OECD countries have higher risks, Statoil require that they yield a higher return. Paradoxically, the more favourable policies the host governments offer, the more instable the political environment is likely to be. Nonetheless, according to Statoil, political stability is more important than very favourable terms<sup>238</sup>.

## Geographical and cultural distance

Since the reserves are often not located in the same regions as the markets Statoil serve, factors like infrastructure and the proximity to markets are important factors to consider in its location decisions. In theory, Statoil could build up the necessary infrastructure itself, but the question is whether it would be profitable or even ethical<sup>239</sup>. Consequently, it is important for Statoil to be close to established clusters of suppliers, customers and distributors operating in the oil industry. Moreover, a location near the field is regarded as an important advantage for the construction of enormous platforms or large models that are difficult to transport. Thus, if Statoil wants to attack foreign markets where location advantages are important, they have to move their operations to that territory<sup>240</sup>. As its current reserves are depleting Statoil needs to move to developing countries to increase or maintain their production levels. This can pose a problem as Statoil may lack the necessary knowledge of operating efficiently in countries that are both culturally and geographically distant.

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<sup>237</sup> HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07

<sup>238</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07

<sup>239</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07

<sup>240</sup> Vatne, E. (2000). *Global markets-local competence? Internationalisation of the Norwegian petroleum industry*, Working paper 78/00, SNF-project No 4225; Norwegian petroleum industry abroad.

Statoil has today participation shares in 17 producing fields in various countries, and search activities in other countries. Combined the company currently has 35 worldwide operations.

**Figure 22: Overview over Statoil's international operations<sup>241</sup>**



## INTERNALISATION

One of the dilemmas in the oil industry today is what to internalise and what to buy in the market. As oil companies are integrated along the whole value chain, they naturally perform a variety of tasks from the extraction of oil to refining and distribution. However, what activities the companies choose to internalise differ also among the integrated oil companies. For instance Statoil buys their drilling equipment for well services in the market, which are by many companies regarded as part of their core competences. Moreover, Statoil used to own one of the world's largest shipping companies (Statoil shipping), transporting oil from offshore to markets. However, that part of the business was divested some years ago and now they buy in services instead of having it as part of their asset base and core competence. The decision of what activities to coordinate internally and what to buy in the market depends on what is most cost efficient at different times. If the markets exist, companies might as well outsource some of their activities to specialise more on their core competences. Then again, there is a trend in the opposite direction. Some oil companies are in-sourcing more of their technology development, and this may reflect their wish to have greater control over the technology, which is becoming an increasingly important competence of oil companies<sup>242</sup>.

<sup>241</sup> Statoil's website, available at <[www.statoil.com](http://www.statoil.com)>, 13.03.07.

<sup>242</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07

## CONCLUSION

As evident from this analysis, Statoil has the right conditions in place to undertake foreign investments. Moreover due to the structure of the industry and the necessity to operate where the resources are located, this industry is very suitable for MNEs. Statoil should use its experience and technological capabilities derived from its domestic operations as an ownership advantage when expanding to new locations, especially technically challenging oil and gas fields. Moreover, Statoil seek to locate in areas with good geological potential and a stable fiscal regime. Statoil's choice of whether to internalise its activities or coordinate them through the market are dependent on the specific activity and the desired level of investment and control. We conclude that Statoil has ownership advantages, location advantages and internalisation advantages to undertake foreign production. However, further analysis is required to determine whether Statoil has what it takes to succeed abroad relative to its competitors. Consequently, we will examine Statoil's resources and competences in more detail in the following chapter.

## CHAPTER 4: THE RESOURCE BASED VIEW (VRIO)

The resource based view addresses why firms are different and concentrates on a firm's internal strengths and weaknesses. With this analysis we aim to identify the main resources and competences of Statoil and how the company can utilize these in order to generate a sustainable competitive advantage internationally.

From the external analysis of the macro-environment (PESTEL) and the industry environment (Porter's five forces) we have identified the main drivers of the industry, and the most influential competitive forces. We conclude that the main challenge for the global oil industry today is securing access to petroleum reserves due to nationalisation of resources and increasing power of host governments and their NOCs in non-OECD areas. Moreover, competition is intensifying with the entry of emerging market oil companies and the independents, together with service suppliers gaining a stronger foothold in the market. The combination of these factors has made it increasingly difficult for the traditional IOCs to compete in the market, and they need to adapt to these changes in order to survive. Next, we have applied Dunning's OLI framework to determine what advantages Statoil has when expanding abroad and where and how it should pursue internationalisation.

From our analysis we have identified critical success factors that oil companies in the industry must possess. First and foremost, oil companies need access to new oil and gas reserves to maintain their production levels. In order to obtain entry into new petroleum-rich regions, it is crucial that the company has a strong reputation and track-record of completed projects, and have the ability to establish good relationships with host governments. To be an attractive partner for the NOCs, we have identified size incorporating a large skilled workforce, financial and operational strength as well as strong technological competences to be critical success factors. These are important in order to be able to take on large and risky projects and provide the NOCs with the technology and infrastructure they lack. We will discuss the importance of these resources and competences in further detail in the following section. We attempt to distinguish between what Statoil currently possesses of importance that the company can bring with them internationally, and what kind of resources it lacks to better compete in the global oil industry. Consequently we will try to match the industry relevant opportunities and threats identified in our external analysis with Statoil's internal strengths and weaknesses to gain a competitive advantage. In order for a resource to give rise to a

sustainable competitive advantage it has to be valuable, rare, inimitable and properly organized by the company. Our findings will later result in an evaluation on how Statoil can acquire the necessary resources and competences it currently lacks.

## STATOIL'S MAIN RESOURCES

### Natural resources

As the competition for the world's declining reserves is intensifying, gaining access to the oil and gas resources are becoming increasingly difficult for oil companies. In addition, efficient management of existing reserves is important in order to fully exploit the value of such resources, and hence increase a company's profitability.

Having access to oil and gas reserves is one of the most valuable resources for Statoil. After all, the company generates its income from the sale of oil and gas. Moreover, it is the most common source of energy today and is consequently extremely valuable also to the private end users and other industries. Nevertheless, its reserves to production rate are in decline, and Statoil's reserves replacement ratio was merely 73 percent in 2006, compared to 102 percent in 2005 and 106 percent in 2004<sup>243</sup>. This implies that Statoil needs to concentrate its efforts on securing better access to new petroleum resources.

From nature oil and gas reserves are rare as they are non-renewable resources. Moreover, the era of large oil and gas discoveries is over and the world's oil and gas fields are maturing making the resources even rarer. It is difficult to locate the best resources and then acquiring the license for exploration. It is also becoming increasingly challenging, both technologically and politically to recover the oil and gas resources. Combined these factors make it even more difficult for Statoil to maintain or increase their production levels.

Nonetheless, as there are no immediate substitutes for oil and gas, it will continue to play a key role in the energy supply throughout the period to 2030. Diminishing oil and gas reserves, however, together with intensive political and consumer pressure are encouraging companies

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<sup>243</sup> Oilvoice, *Production and reserves data for all companies-Statoil*, available at <<http://www.oilvoice.com/m/viewProdRes.asp?id=179>>, 17.06.07.

to broaden their portfolio of products and increase expenditures on sustainable sources of energy such as wind, solar and nuclear power. Early investment in these alternative energies could improve Statoil's competitive advantage, although oil and gas will be their main source of income also in the years to come.

Even if these oil and gas resources are valuable, rare and hard to substitute, they should also be properly organised within the firm to provide a sustainable competitive advantage. It is important for Statoil to be present in the areas with the greatest geological potential to extract petroleum resources. To spread risk and maximize its profit potential the company tries to diversify its portfolio of projects and spread its operations across several countries. Being physically close to the natural resources also facilitates the control and management of production and operation of the fields, together with the ability to take advantage of local networks and clustering effects. Moreover Statoil focus on organising its oil and gas resources in a way that will benefit all stakeholders, including the local communities where it operates. Nonetheless, Statoil has realized that is difficult to act alone internationally, as it is becoming increasingly difficult and costly to get access to the declining petroleum resources. Thus, many of Statoil's projects are operated under Production Sharing Agreements (PSAs), where international project partners share risks and costs together with the national resource holders<sup>244</sup>.

Although Statoil has valuable, rare, and hard to substitute natural resources to a certain extent in which it aims to properly organise, we do not believe that these will provide Statoil with a sustainable competitive advantage. After all, in theory the world's oil and gas resources are available to all oil companies, and we do not think that Statoil has a competitive advantage over its competitors in acquiring access to these resources. Moreover, as its main focus has been on the now maturing fields on the NCS, its international presence has suffered from this. Consequently, we believe that Statoil's access to international natural resources is currently a competitive disadvantage for the company.

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<sup>244</sup> HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07

## Technological resources

Having access to the right technology is extremely valuable within the oil industry in order to extract and produce more cost efficiently and increase the recovery rates of existing oil and gas reserves<sup>245</sup>. Statoil possesses valuable technology with which it can compete in complex projects requiring advanced technology. One of Statoil's main technological advantages is its expertise in oil and gas exploration, drilling and production from technically challenging fields, such as deep offshore waters and arctic regions. Statoil has become a leading technology provider in these areas and was among the first companies to adopt cutting-edge technology like horizontal drilling, 3D seismology, and floater and sub-sea technology. The area in which Statoil has the least developed technology is on the LNG side. The company has the competence to use it, but has not yet developed the technology internally. In Norway it has not been necessary to develop LNG as the resources has been so close to the markets and pipeline transport have been the most efficient transport solution. But now as the costs are increasing and the production in the developed countries is decreasing, the resources must be transported over larger distances and for this LNG is the solution<sup>246</sup>. Thus, Statoil needs to develop its LNG competence and technology to be able to take advantage of this new market opportunity.

Even if Statoil is considered to have valuable technological resources, a relevant question that arises is whether these also are rare, as most of the technology developed in the industry is or will quickly become available to all oil companies. In a typical license project with several partners, none of the companies, not even the operator have sole ownership of the technology developed for that specific project as the costs is shared by all licensees. Consequently, the technology itself is not rare as it is theoretically available to most of the companies in the industry, maybe with the exception of emerging market companies. Nevertheless, what is considered to be rarer is the know-how in utilising this technology to its full potential, and the ability to combine different technological capabilities and project management in a way that makes the total solution unique<sup>247</sup>. Statoil has over the years and from the experience in the North-Sea developed valuable and rare know-how in how to utilise exploration technology in technically challenging fields and to exploit the full potential of its reserves. Statoil's strong

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<sup>245</sup> IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future*, available at <[http://www.iea.org/Textbase/publications/free\\_new\\_Desc.asp?PUBS\\_ID=1568](http://www.iea.org/Textbase/publications/free_new_Desc.asp?PUBS_ID=1568)>, 10.03.07

<sup>246</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>247</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

emphasis on efficient resource management and its willingness to take on technology risk has increased their recovery rates substantially. Statoil has been very innovative in developing technology on increased oil recovery techniques (IOR), and many oil companies do not use as sophisticated drilling equipment as Statoil and hence leave more oil in the ground. Statoil is also a few steps ahead of competition in developing total solutions of reducing CO<sub>2</sub> emissions, and the company will most likely be able to capitalize on this know-how later when more projects demand such a solution<sup>248</sup>.

With the use of the oil service sector, the technologies developed by companies like Statoil have been made more available to other companies. However, Statoil's technological know-how, which is built on the experience from the Norwegian fields and has been developed over time, is more difficult to replicate, as it is dependent on both tacit and codified knowledge. Hence, it may not be the technology itself which is difficult to imitate, but rather the know-how in using it most effectively.

As Statoil's technological know-how can relatively easily be transferred to new and technically challenging fields around the world, this should provide the company with a competitive advantage in locations where such expertise is required<sup>249</sup>. Nonetheless, the rate of technological development changes at a rapid pace, hence, Statoil needs to constantly be at the forefront of technological development in order to gain sustainable competitive advantage over its competitors. Moreover, in the future, due to the scarcity of reserves and increasing concern to protect the environment, we recommend continued investments in improved oil recovery techniques and environmentally sound technology to maintain competitiveness. To conclude even if Statoil does not possess technology that leads to a sustainable competitive advantage, it has valuable, rare, hard to imitate and well organised know-how in utilising its core technology which can provide the company with a current competitive advantage.

### Financial resources

In the oil industry, it is critical that companies have access to large financial resources to acquire oil and gas resources that are becoming increasingly expensive to recover. Thus, financial strength is crucial in order to take on larger and more complex projects, and spread

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<sup>248</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

<sup>249</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.



risk. It is also necessary to have sufficient capital to invest heavily in R&D to keep up with the technological trends in the industry.

Statoil is a highly profitable company and achieved record earnings last year due to the high oil prices. Nonetheless, with the industry cost inflation Statoil's margins are pressured. Consequently, one of Statoil's greatest current challenges is to ensure a good balance between profitability and production growth. A high growth rate in production however requires large investments and a high future activity level. In order to realize long-term growth, it is essential to increase the natural reserves faster than the rate of production<sup>250</sup>. Moreover, Statoil has invested heavily in R&D to develop the technology necessary to commercialize its resources and take advantage of the upstream opportunities in the market. Establishing production platforms and developing the proper infrastructure in near vicinity to the natural resources also requires large investments. Furthermore, large financial resources are needed if Statoil is to gain further access to the reserves situated in Canada, the U.K., and Gulf of Mexico as these are more expensive to explore for due to geological complexity of the fields<sup>251</sup>.

Statoil possesses valuable financial resources, however it does not have unlimited access and many of the oil majors have far larger financial strength than Statoil. Nonetheless, Statoil seeks to organise its financial resources in an effective manner and often engages in project sharing agreements to share the risks and costs of projects. Moreover, the company carefully organises its financial resources by investing in various projects around the world in order to diversify both project-specific and country-specific risks and maximise returns<sup>252</sup>.

Although, Statoil has large financial resources, it lacks the financial strength to engage in large and risky projects on its own, and obtain access to expensive resources. Hence we conclude that its financial resources might in fact provide Statoil with a competitive disadvantage in the international setting.

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<sup>250</sup> Statoil's website, *Statoil and sustainable development 2005*, available at <<http://www.statoil.com/INF/SVG03595.NSF/UNID/4E3794A5768DB23EC125713D0052E6BF?OpenDocument>>, 01.06.07

<sup>251</sup> Ramm, H. H. (2007). Independent petroleum consultant, *Telephone interview*, 07.06.07.

<sup>252</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

## Human resources

In knowledge-based firms, such as Statoil, the human resources typically become the most valuable asset as they possess the know-how and skills embedded in the firm. However, securing access to sufficient human capital is a major challenge for Statoil and the industry in general.

An ageing population in combination with earlier downsizing efforts of oil companies has resulted in a large portion of their current workforce soon retiring. Moreover, the industry seems to be less attractive for young people as many have a bad image of the industry and prefer “greener” industries. This has led to an industry wide war for talent. Also, with increasingly international operations finding the necessary local skills around the world is challenging. Consequently, it is critical for Statoil to be able to train a large number of professionals from many different nations. However, Statoil has a recognized trainee program, and invest highly in the development of its human capital. Moreover, the company appreciate that its employees have a good balance between work life and leisure. These social competences are quite valuable and rare in the industry, which we believe is highly appreciated among potential employees.

Moreover, Statoil is a popular employer in Norway. For several years in a row both business and engineering students at Norwegian colleges and universities have voted Statoil the most desired employer in the country. This status is valuable, rare and hard-to-imitate in the current war for talent within the industry.

As a company with typical Norwegian roots, we do not believe that its workforce is especially mobile. However, the company is willing to hire local knowledge where that is more beneficial and has also started to focus on hiring more international people. According to our findings Statoil has valuable organizational capabilities in recruiting, training and motivating its human resources. Furthermore, its strong embedded corporate values and culture are transferred throughout the whole organization and value chain. Statoil might however, not have the same ability to attract international talents. Therefore, we conclude that Statoil’s human resources do not lead to a sustainable competitive advantage internationally, but competitive parity at best.

## Reputational resources

From our previous analysis, we have identified that having a good reputation among various stakeholders and host governments is valuable in negotiating deals. According to our research, Statoil enjoys a strong reputation in several areas. The most significant relates to the company's proven track record of completed projects on the NCS and the reliability of supply of oil and gas. Moreover, the company stands out as a frontrunner in social and environmental responsibility, and in some cases the company can take advantage of the country of origin effect and the fact that it is partly state-owned<sup>253</sup>.

Even if its reputation is important and valuable to Statoil, many other companies share the same traits, and hence its reputation might not be rare. We question if in fact Statoil is a more reliable supplier than its competitors. After all, the company is experiencing several project delays around the world due to the increased complexity of projects. Nevertheless, compared to Russia's Gazprom that has used its supply of gas as a political weapon, we believe that Statoil positively stands out as a more reliable supplier. Thus, we suggest that Statoil should take advantage of the threat in the market regarding the security of supply and leverage its reputation as a reliable supplier. Moreover, due to the nature and recent changes of the industry Statoil has the ability to exploit several other opportunities. People are increasingly concerned about the need to protect the environment and Statoil is heavily engaged in developing more environmentally friendly solutions, which should appeal to host governments and the general consumers. Nonetheless, the effects of Statoil's efforts are not yet documented and we do not know for sure if this in fact provides the company with an advantage in dealing with host governments or attracting a skilled workforce. Moreover, similar initiatives are undertaken by most companies in the industry and we see no extraordinary reasons why Statoil should gain more goodwill from this than other actors. Another positive contribution to Statoil's reputation today, is its firm and uncompromising stand on corruption. However, this has not always been the case, and the Iran scandal in 2002 where Statoil was found guilty of bribery, severely damaged the company's reputation<sup>254</sup>. Hence, it will take some time for the company to clean up after this. Furthermore, Statoil is of the opinion that it might have a reputational advantage in NOC countries, as it has been a state-owned company for so many years, and is still largely influenced by the state. As the

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<sup>253</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>254</sup> BBC News (2004). *Statoil fined over Iranian bribes*, available at <<http://news.bbc.co.uk/2/hi/business/3849147.stm>>, 13.06.07.

NOCs themselves are an agent for their country’s petroleum politics, they might prefer to cooperate with someone that has been in the same position. In this way Statoil is different from the traditional IOCs, and might become a preferred partner. Also, there is a belief that Norwegian companies are less “greedy and dominant”, and more neutral with regards to world politics than for example the Americans and the British<sup>255</sup>. Nevertheless, Norwegians have a tendency to overrate the advantages of being Norwegian, and hence this country of origin advantage and NOC foundation should not be overestimated.

Reputational capabilities are difficult for other firms to imitate, as they are intangible resources developed over time. However, even though Statoil enjoys a reputation of being a reliable supplier, environmentally committed and a less greedy and dominant company, we do not think that its reputation alone is sufficient to provide the company with a sustainable competitive advantage, but rather competitive parity.

**Figure 23: Summary of Statoil’s resources**

Statoil’s Resources	Valuable	Rare	Inimitable	Organized	Competitive Situation
<i>Natural resources</i>	Yes	Yes	No	No	<b>Competitive disadvantage</b>
<i>Technological resources</i>	Yes	Yes	Yes	Yes	<b>Current competitive advantage</b>
<i>Financial resources</i>	Yes	No	No	Yes	<b>Competitive disadvantage</b>
<i>Human resources</i>	Yes	Yes	No	Yes	<b>Competitive parity</b>
<i>Reputational resources</i>	Yes	No	Yes	Yes	<b>Competitive parity</b>

**Conclusion**

The resource-based analysis of Statoil demonstrates the importance of possessing resources that are valuable, rare, hard to imitate, and properly organised to gain sustainable competitive advantage. We argue that Statoil’s leading technological know-how in extracting oil from

<sup>255</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

deep waters and technically challenging fields together with the increased recovery techniques provides them with a current competitive advantage. Moreover, according to our research the company's total technological solutions for the capture and storage of CO<sub>2</sub> will become a significant advantage to Statoil in the future. However, as these advantages are not inimitable in the long-run Statoil needs to find ways to sustain its current competitive advantages for as long as possible and focus on developing new superior technological know-how in other areas.

Moreover, Statoil's skilled workforce and strong ability to attract new human capital, together with its solid reputation is advantageous to the company. However these resources do not generate sustainable competitive advantage as they fall short in the four criteria. Nevertheless, these resources can at best provide the company with a competitive parity. Finally as Statoil's operations have so far mainly been domestic, the international arena presents the company with a new set of challenges. Consequently, we conclude that Statoil possibly has a competitive disadvantage in the access to natural and financial resources compared to its main competitors, which can hamper its international growth.

## COMPETENCES STATOIL CURRENTLY NEEDS TO DEVELOP

From our analysis and the figure 23 above it is evident that not all of Statoil's resources provide the company with competitive advantage. Thus, the company must emphasize on addressing its weaknesses in order to better compete internationally, and seek to develop or acquire the resources that currently only give them competitive parity.

The main weaknesses or disadvantages that we have identified are insufficient access to natural and financial resources. These are critical factors for success in the global oil industry, as companies need access to new reserves to stay in business and financial strength to take on large and risky projects. Moreover, the company should leverage its reputation as a reliable supplier of oil and gas, in addition to its dedication to being both socially and environmentally responsible. Even if these resources will probably not generate a sustainable competitive advantage, they are still crucial in developing good relationships with host governments. Also, being seen as an attractive employer to both national and international employees is essential for capturing highly skilled people. Furthermore, even though Statoil is considered to have

competitive advantage in its technological know-how, it is important that they are constantly at the forefront of developing new technology and solutions for better exploitation of the natural resources. Although our main focus is to evaluate how Statoil can increase its international competitiveness, we have decided to include a discussion on the management of existing resources on the NCS, as this will still be the main production base for Statoil also in the years to come. Consequently, we suggest that Statoil needs to focus on the following to better compete internationally:

1. Improve the natural resource management on the NCS.
2. Achieve greater size and scale effects
  - a. Increase the financial strength
  - b. Secure better access to skilled human capital internationally
3. Increase the international presence and secure better access to new oil and gas resources.
4. Improve its reputation and strengthen relationships with NOCs and host governments.
5. Further develop technological competence, and find new solutions for better exploitation of oil and gas resources.

The next step is to analyze how Statoil could develop or obtain these resources and competences in the best manner. Thus we will evaluate the four different strategic alternatives: internal development, horizontal and vertical merger and strategic alliance according to the five improvement criteria stated above. From this we aim to identify what we believe will be the best alternative to increase its international competitiveness, considering its current situation.

# PART 6: STATOIL'S STRATEGIC ALTERNATIVES

## CHAPTER 1: ANALYSIS

The goal of this section is to evaluate the different modes of expansion Statoil could pursue to improve its international competitiveness. Choosing among the various alternatives involves trade-offs as each mode has its own benefits and costs. Consequently, we need to consider each alternative against Statoil's needs and the requirement for specific resources and competences, as identified in the preceding section. For the purpose of this thesis we have proposed four different strategic alternatives, which Statoil could pursue, namely internal development, mergers and acquisitions, and strategic alliance. We will evaluate whether a horizontal or vertical integration will lead to increased expansion along the geographic expansion, which is the main objective for Statoil. Our recommendation will be based on the mode we believe will provide Statoil with the most critical and relevant resources and competences it currently lacks to better compete internationally.

### INTERNAL DEVELOPMENT

Statoil is today a highly profitable and recognized oil company which has mainly expanded through organic growth and internal development. The company enjoys a strong position in its domestic markets, but needs to increase its international presence as reserves on the NCS are depleting. Hence, one option for further expansion is to continue to develop internally, through investing in innovative and efficient technology to facilitate a more advanced exploitation of oil and gas reserves<sup>256</sup>.

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<sup>256</sup> Reuters (2007), Oil & Gas-Integrated : Overview, available at <<http://www.investor.reuters.com/business/IndustryDmDescr.aspx?industry=OILINT&target=%2fbusiness%2bussecindustry%2fbussecindfake%2fbussecindoverview&page=dmdescr>>, 03.05.07.

## Resource management on the NCS

Statoil is today the largest operator on the NCS, with operatorships in 25 production fields<sup>257</sup>. The company directs strong efforts towards efficient management of these resources and is among the companies in the industry with the highest oil recovery rates<sup>258</sup>. Hence, we are confident that Statoil has the competence to continue to manage its domestic operations through internal development. Moreover, as parts of the Norwegian Continental Shelf are to a great extent mature, it requires a higher level of competence and efforts to keep up the production in the medium to long term. Some argue that diversity in the searching, extraction and production of oil and gas in the technically demanding areas of the NCS require a multiplicity of players to promote various geological models and different recovery techniques<sup>259</sup>. Hence, from this point of view, Statoil would through internal development maintain the competition and diversity on the NCS, and hence contribute to efficient resource management.

## Size and scale effects

As evident from the previous analysis, the size of companies matter in this industry, as bigger companies are able to take on larger and riskier projects. If Statoil were to grow through internal development, they would not be able to increase their size in the short-term due to limited access to financial and human resources. Nevertheless, this size effect might be overrated and it is not the only determinant of a company's success. Actually, its current size can be beneficial to some host governments as Statoil is considered to be less dominant and greedy, and will be able to adapt more quickly to changes in the environment. Hence, Statoil could continue to be successful even if it does not gain the significant size effect. Yet, it would have to find other competences to compete on, such as technological capabilities or expertise in certain areas.

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<sup>257</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>258</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

<sup>259</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.



## International presence and access to new reserves

The main disadvantage of internal development is that it does not allow Statoil to instantly get access to the resources they lack as is the case with other modes of expansion. Hence, Statoil might not have the ability to strengthen its international position alone due to the increasingly challenging business environment in which it operates. As of today, due to the strong competitive forces and emergence of new competition, Statoil's international opportunities are limited. We believe that the company can continue to compete on regular commercial terms in OECD areas. However, as the reserves in these countries are declining, the company needs to improve their efforts in getting access to new reserves in non-OECD countries. This will be very challenging as the company's previous internationalisation efforts have been seriously constrained by political factors. The recent situation in Venezuela illustrates this, where the president of the country is threatening to throw Statoil and other foreign oil companies out of the country, in the pursuit of nationalising the country's oil resources. As Statoil has been present there for over 10 years and invested large amounts of money, this would be a devastating loss. However, as Venezuela lacks skills and competence in the extraction and production of oil and gas, it is dependent on foreign technology and expertise in this area<sup>260</sup>. Even though Statoil would like to continue as operator and owner of resources also in the future, they need to consider also becoming a provider of technological expertise and supplier of services to the national resource owners. In fact, Statoil will most likely have to do both concurrently. However, they face increasingly new competition from suppliers that are leading technology developers and are becoming valuable partners to the resource holders.

Moreover, Statoil could also leverage its expertise from deep waters and harsh weather conditions from the NCS, and exploit it in new and challenging geological areas. One opportunity is to start focusing on niche segments or search for new play types, like they have done in Canada with the acquisition of an oil sand company. Hence, in order to grow internationally organically, Statoil should focus on areas where they have technological advantages, such as deep- and arctic waters. These fields are mainly to be found in the U.K, Gulf of Mexico and Canada.

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<sup>260</sup> E24. *Kan miste olje for 50 milliarder*, available at <<http://e24.no/boers-og-finans/article1700346.ece>>, 21.03.07

Although, Statoil might be able to increase its international presence to a certain extent through internal development, we argue whether this will be the best option to increase the company's competitiveness internationally. Combining forces with another actor might give Statoil increased financial and operational strength in getting access to new reserves and taking on larger and more risky projects.

#### Reputation and relationships with host governments and NOCs

The main advantage with internal development is that it is the simplest way to transfer its current corporate resources, like its corporate culture and embedded tacit knowledge into new business areas. Thus, Statoil can use this in establishing relationships with host governments and better control how the company wants to be perceived by various stakeholders. This way it is easier for them to fully focus on being socially and environmentally responsible, in addition to having zero tolerance for corruption.

Statoil enjoys today a solid reputation and have established good relationships with the host governments in most countries where they operate. However, in certain countries such as Nigeria and Iran with very demanding political regimes, it is extremely difficult to communicate and build relations<sup>261</sup>. Also in Venezuela for example, where Statoil aims to keep a good dialogue with the authorities, the company's assets can still be transferred back to the Venezuelan government without compensation. Nevertheless, according to Tjersland, Statoil might have a comparative advantage in dealing with host governments of these countries as they have been a state-owned company for so many years, and still today have large stately influence. As previously discussed, the NOCs themselves are an agent for their country's petroleum politics, and they might prefer to cooperate with someone that has experience with what it is like to be part of a national strategy<sup>262</sup>. Further, Statoil has throughout the years built up a reputation of being a reliable supplier of oil and gas with a good track record of completed projects. However, Statoil can become even better at delivering the projects within the expected time and budgets. Hence, this is one way Statoil can improve its reputation further through internal development. Moreover, with the increasing concern for the environment it is very important for companies to act in a socially and environmentally responsible manner. This is something Statoil can capitalise on in the

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<sup>261</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>262</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

future, as they are involved in several projects on how to reduce the emission of CO<sub>2</sub>. Nevertheless, as the company is relatively “new” on the international arena it still lacks experience in completing projects internationally and dealing with host governments in developing countries. Therefore, it could be beneficial for Statoil to team up with a partner who has more extensive experience from operations internationally and already established relationships with host governments. However, our analysis suggests that Statoil could leverage its reputation and relationships to a certain extent through internal development.

### Technological competences

Statoil could also grow internationally through leveraging its position as a leading technology provider and reliable supplier of oil and gas. The company is investing heavily in R&D and is at the forefront of developing new technology for the oil and gas industry. Statoil can compete in most complex projects requiring advanced technology, and in all of Statoil’s larger projects, there is technology development concurrently. However, when Statoil engages in a licence with other partners they do not have sole ownership of the technology developed in the specific project as it is shared by all licences of the project. Nonetheless, as an operator, the company is the main driver and user of the technology development, and thus acquires the competence in using it which can be transferred to new projects. This underlines the need for Statoil to become an operator of more projects and not just a partner<sup>263</sup>.

Nonetheless, Statoil does not enjoy technological advantage in all areas. For instance, it currently lacks the ownership of important LNG technology, which is today considered to be the clearest technological advantage within the industry. Even if this LNG technology is currently not yet part of Statoil’s core competence, it is currently being developed together with Linde in the Snøhvit project. This will be the first LNG value chain in Europe and is expected to start operation this autumn. Hence, with the experience from the development of this LNG value chain Statoil should be in a good position to compete for new LNG projects in the Middle East, Asia and Africa in the future<sup>264</sup>.

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<sup>263</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07 .

<sup>264</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

## Conclusion

Despite the current industry challenges we believe that Statoil could most probably pursue an internal development mode of expansion and be profitable also in the future. After all having a good organic track record is a prerequisite for long term sustainable growth. Also, it is risky to mainly grow through other modes of expansion like M&As as companies often have to pay large premiums for their targets, and this can erode much of the value created<sup>265</sup>. However, if Statoil were to continue on its own it could be forced to take on a new role as a supplier of technology and services rather than resource holder, as it will be increasingly challenging to get access to natural resources. We conclude that Statoil would survive on its own also in the future, but it will have to keep up with the trends in the industry and eventually adapt its business model to better compete. The question is rather if other strategic alternatives are more suitable or effective in Statoil's pursuit of gaining stronger international bargaining power, especially in getting access to new markets and natural resources.

## HORIZONTAL MERGER

Another alternative is to grow non-organically, through merging with or acquiring another company. Companies can be combined either through horizontal or vertical integration. A horizontal merger means that two direct competing firms within the same industry decide to join forces. The main goal of a horizontal merger is to strengthen the position relative to competitors and increase market share. As Statoil already has announced its intention to merge with Norsk Hydro's petroleum business, we will use this case as a basis for analysis.

The proposed merger of Statoil and Norsk Hydro was announced on December 18<sup>th</sup> 2006. The deal involves a merger of Hydro's petroleum division with Statoil into one entity, based on the principle of a merger of equals. The new company will temporarily operate under the name of StatoilHydro; however a new proposed name is to be developed. The company's business office will be in Stavanger, but corporate functions will be located in both Stavanger and Oslo. The merger can be seen as a growth-oriented response to the challenges facing the oil and gas industry today. Ensuring increased competitiveness internationally and long-term

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<sup>265</sup> Nunn, D. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

growth on the NCS have been regarded as the main rationale behind the merger. Both companies failed to find enough oil and gas last year to compensate for declining production in the North Sea, and they strive to increase growth internationally. The government will have a shareholding of about 62.5 percent in the merged company, but intends to increase the state shareholding to 67 percent over time. Combined, the entity is expected to improve its production rates and reserves base. The company projects to pump 1.9 million boe daily this year, of which 1.6 million barrels will be in Norway. Its proven oil and gas reserves are estimated at 6.3 billion boe<sup>266</sup>. It is estimated that upstream activities will represent 90 percent of the combined company earnings, which is one of the highest numbers among the integrated oil companies<sup>267</sup>.

Hydro can be seen as an attractive partner for Statoil as the company is one of the world's largest offshore oil companies and the second biggest oil and gas operator on the NCS. Hydro has its main production base in Norway, but also has significant oil and gas production internationally in Angola, the Gulf of Mexico, Canada, Libya and Russia as well as activities in Iran, Brazil and Denmark. Around a half of Hydro's exploration activities today take place outside Norway, and they are mainly involved in deep water exploration drilling projects, in which they have valuable expertise. Hydro is also an important player in the development of renewable energy sources, which is believed to be an important future asset for the company. Hydro holds a strong business position and expertise within its core activities and has delivered strong financial results<sup>268</sup>. However, its position is threatened by the growing power of suppliers and scarcity of resources. Hydro has had to cut its production-volume guidance several times and is struggling to replace its reserves<sup>269</sup>. Hence, Hydro's oil division is currently having problems, and has become a potential take-over target.

The Norwegian government considers this merger to be strategically and industrially sound as they believe that the two companies jointly will be able to create greater value than the two companies could have done separately. According to Helge Lund, the CEO of Statoil, the

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<sup>266</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>267</sup> Morgan Stanley (2006). *Oil & Gas, Statoil and Norsk Hydro propose merger*, Morgan Stanley Research Europe, 19.12.06.

<sup>268</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>269</sup> The Wall Street Journal-Online (2006), *Norsk Hydro-Statoil Marriage is Sensible in Competitive Arena*, available at <<http://online.wsj.com/article/SB116648975683553959.html>>, 19.12.06

merger is predominantly driven by the opportunities for growth and not cost synergies<sup>270</sup>. Our aim is to analyze whether this mode of expansion will provide Statoil with the resources and competences it currently lacks to better compete internationally.

### Resource management on the NCS

The Norwegian Continental Shelf is a major source of revenue for both Statoil and Hydro, and will still be the main production base for both companies after the merger. Hence, how the proposed merger will affect the management of existing resources on the NCS has been debated. First of all, Statoil and Hydro's participation on the Norwegian shelf are to a large extent overlapping. Statoil is involved in the same producing fields as Hydro, with the exception of six fields. Moreover, both companies have stakes in the same oil and gas transportation facilities. It is believed that the merger can increase efficiency by eliminating double efforts in the same fields. Also, as fewer new discoveries are expected and parts of the NCS are to a great extent mature, a higher level of competence and resource efforts are required to maintain the production in the years to come. Thus, StatoilHydro can use their complementary technologies and expertise together with increased financial and operational strength to contribute to more effective operations and thus prolong the economic life of the NCS<sup>271</sup>.

The other side of the argument is that StatoilHydro might get a too dominant position domestically. The merger will result in a company with a significantly larger portfolio of production licences than the other licensees on the NCS. Together they will control more than a third of the remaining proven reserves, and have operator ship of two-thirds of the fields. Hence there is a fear that the combined entity may gain a too strong position domestically and undermine diversity on the NCS. Diversity in exploration, development and operation is necessary in order to promote various geological and commercial models, and various technical solutions regarding development and transportation. Historic numbers from the production on the NCS, has shown that a multiplicity of players with different technology and solutions led to higher recovery rates. According to Ramm it would have been wiser for Statoil and Hydro to operate separately on the NCS to maintain the competition and diversity.

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<sup>270</sup> Global Insight Daily (2006). *Statoil and Norsk Hydro to Merge Oil and Gas Businesses*, Global Insight Limited, 18.12.06.

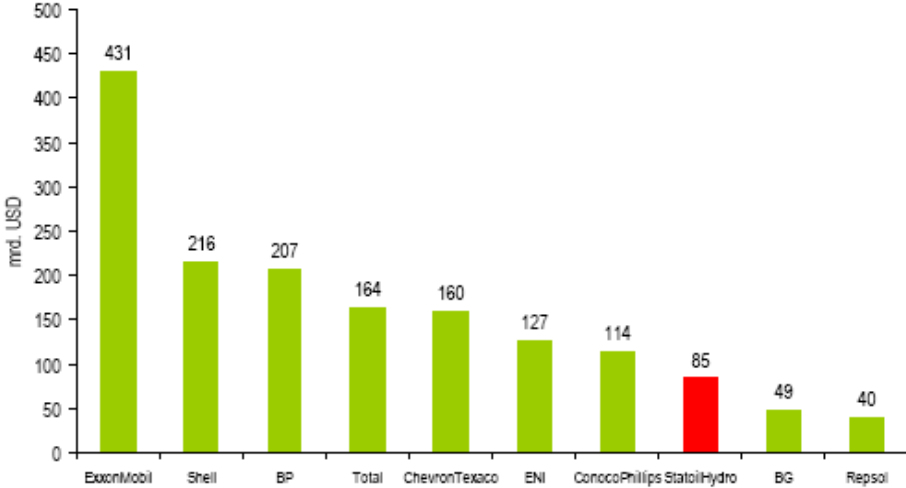
<sup>271</sup> Storting proposition no, 60 (2006-2007). *Merger of Statoil and Hydro's petroleum operations*, available at <<http://www.regjeringen.no/nb/dep/oed/aktuelt/nyheter/2007/Sammenslaingen-av-Statoil-og-olje--og-ga.html?id=461179>>, 30.03.07.

As a result of the merger, Ramm argues that StatoilHydro’s operator ships on the NCS should be reduced to 40 percent to maintain competition and diversity<sup>272</sup>. In fact, to reduce the merged company’s influence, the government might require that the company transfers some of its operator ships to other players. It is however questionable whether this will contribute to improving the resource management and increasing the value creation on the NCS. Nevertheless, the government will have to ensure that the merged company operates in a manner that will enhance the value creation on the NCS and promote diversity<sup>273</sup>.

Size and scale effects

The merger is the third biggest in the oil and gas industry this decade<sup>274</sup>, and by joining forces StatoilHydro will become the world’s largest offshore oil producer in water depths of more than 100 meters<sup>275</sup>. Moreover StatoilHydro will become the largest company in Norway, and have a market value approaching the larger integrated oil companies<sup>276</sup>. The following graph illustrates StatoilHydro’s market value in comparison to other leading international oil and gas companies per 27.03.07.

Figure 24: Integrated oil companies measured by market capitalization (2007)<sup>277</sup>



<sup>272</sup> Ramm, H. H. (2007). Independent petroleum consultant, *Telephone interview*, 07.06.07.  
<sup>273</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro’s petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.  
<sup>274</sup> Financial Times (2006). *Statoil and Hydro in \$29bn deal*, The Financial Time Limited, 19.12.06.  
<sup>275</sup> Associated Press Newswires (2006). *Norway’s Statoil acquires Oil and Gas operations of Norsk Hydro*, The Associated Press, 18.12.06.  
<sup>276</sup> The Wall Street Journal Online (2006). *Statoil, Norsk Hydro Create an Energy Behemoth*, available at <<http://online.wsj.com/article/SB116642748971353246.html>> , 19.12.06.  
<sup>277</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro’s petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

The merger is expected to lead to substantial cost-savings through more efficient management and the elimination of duplicate functions such as head-office, administration, IT, and R&D. Moreover, by combining common operations and releasing human capital, higher efficiency through economies of scale is projected, as well as purchasing synergies, as a larger organisation is likely to have stronger bargaining power over suppliers<sup>278</sup>. This could potentially create a problem if the new entity will squeeze the profitability of the Norwegian suppliers and hence decrease the incentives to develop innovative technology and solutions. By losing a large customer, the suppliers will have fewer, although larger contracts to bid for and this might put downward pressure on prices. Nevertheless, StatoilHydro has expressed its commitment to act in a responsible manner to maintain competition among Norwegian suppliers. Also, if the company achieves a successful growth rate internationally, this might even benefit the Norwegian suppliers by means of larger and more frequent orders<sup>279</sup>. Moreover, a merger is also expected to lead to increased revenues in the long term by implementing best practises and more effective use of scarce resources in relation to drilling and well activities, extraction, integrated operations, management of core areas and international experience. The total cost synergy potential for the combined company is estimated to be about NOK 4 billion per year before tax<sup>280</sup>. Nonetheless, potential cost gains and increased revenues may be eroded by the costs and problems associated with the integration of the two companies.

The merger will also provide StatoilHydro with more human capital, by combining the company's workforce of about 31 000 people<sup>281</sup>. This will allow them to better utilise their human resources in an industry which is currently suffering from a shortage of skilled labour. Instead of fighting for the same human capital, Statoil and Hydro can rather share knowledge and exchange best practises in their recruitment process. Both companies need to attract more human capital from abroad to gain skills and expertise from the international arena. However, we question whether this merger will make StatoilHydro more attractive for international employees as it will still be a very traditional Norwegian-based company with large stately influence. Also, the two entities might loose important skilled people due to the uncertainties

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<sup>278</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>279</sup> Dagens Næringsliv (2006). *Redd for oljegygenten*, 21.12.06.

<sup>280</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>281</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.



and power struggles related to the merger process. Consequently, we question if in fact the combined entity will be able to produce a larger and skilled workforce.

By joining forces the merged company will potentially increase their financial, technological and operational strength and be better able to pursue new international growth opportunities. Hence, the combined entity is expected to have greater ability to engage in a number of larger and riskier projects concurrently<sup>282</sup>. Additionally, according to Nunn, the increased market size of Statoil and Hydro will potentially allow them to better compete against the international oil majors and take a more aggressive approach in acquiring new reserves<sup>283</sup>. Also, the increased financial strength of the combined company is expected to allow the companies to continue their acquisition growth strategy, which is important for further international growth.

Nonetheless, according to Ramm the merger is not justified from a size perspective. He says that Statoil and Hydro are already more than large enough to spread their risk on the NCS, and on an international scale, the size effect will not be significant enough to make a substantial difference. The paradox here is that the company is considered to be too large domestically, while not necessarily gaining enough size to better compete internationally. The optimal size of a global oil company is substantially larger than the combined size of Statoil and Hydro, as the industry has experienced a wave of consolidation in recent years. Moreover, Ramm states that size effect is overrated and not the main determinant of oil companies' success. Hence, according to Ramm, the merger makes no sense from a size and diversification of risk point of view as 80 percent of the production takes place on the NCS<sup>284</sup>.

We believe that the merger will lead to a larger company with more assets and a broader competence level and a better capability to take on large and complex development projects. Nevertheless, we do not think that the size effect alone will provide Statoil with increased bargaining power internationally.

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<sup>282</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

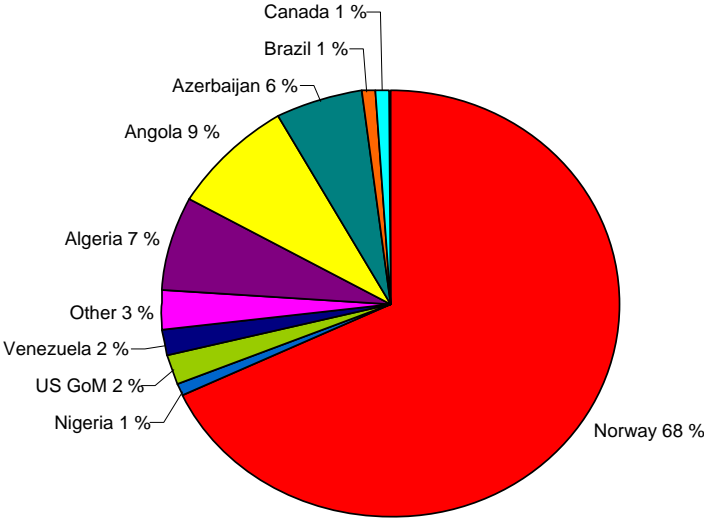
<sup>283</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

<sup>284</sup> Ramm, H. H. (2007). Independent petroleum consultant, *Telephone interview*, 07.06.07.

International presence and access to new reserves

According to Statoil and Hydro, their international portfolios are well fitted. The merged company is expected to achieve operational synergies and increase profitability by combining resources where both companies are represented. They will for instance combine their international workforce and offices in the US, Canada, Belgium, Libya, Angola and Nigeria. They also complement each other’s portfolios in certain areas as Statoil for instance has great experience in Algeria, Brazil, Mexico and Venezuela while Hydro has more experience in Libya, Argentina, Jamaica and Trinidad. The two companies also have complementary portfolios in the Gulf of Mexico, Angola, and Russia. Their combined assets in the Gulf of Mexico especially, are expected to lead to more efficient operations and improved profitability<sup>285</sup>. Together the new entity will be present in close to 40 countries, and combined its largest international reserves will be in Angola, Algeria, and Azerbaijan. However, even though the combined companies’ international operations are extensive, the operations in Norway will still account for 68 percent of its proven reserves<sup>286</sup>. This means that the operations on the NCS will still be very important for the merged company also in the future.

Figure 25: StatoilHydro’s combined international operations<sup>287</sup>.



Nonetheless, as the reserves on the NCS are maturing, both companies strive to increase their

<sup>285</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.  
<sup>286</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro’s petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.  
<sup>287</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro’s petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

international growth. By combining their international production and development portfolios, StatoilHydro will achieve a greater geographical diversification in its production, which is strategically important for developing the company's reserves in the medium to long term<sup>288</sup>.

It has also been claimed that the merger will strengthen the company's bargaining power in the international competition for natural resources as it is easier to promote one large Norwegian company, and not having to consider the possible conflicting interests of Statoil and Hydro. Moreover, as the state is the largest owner of both companies, it makes no sense to compete against itself in biddings for the same international deals. For instance, both companies were rejected participation in the Shtokman gas field last year, and both Statoil and Hydro believe that the chances for getting a new chance are greater when they join forces. However, some argue that what the merger really entails is that Statoil gets rid of one competitor, but this will not necessarily give them increased bargaining power in the pursuit for access to international oil and gas fields.

We question if in fact the combined entity will be able to increase their international competitiveness as their international experiences and portfolios are so similar and will consequently not lead to substantial synergies. As both companies are relatively inexperienced on the international arena, Statoil will have to start more from scratch than if for instance it was to merge with an international partner. Hence, the combined entity will not automatically result in a more international company.

#### Reputation and relationships with host governments and NOCs

We believe that it is beneficial that the two companies have similar value systems and management philosophies. Both companies are committed to a sustainable financial development and innovative development of technology. Moreover, they put great effort into keeping high environmental and ethical standards by complying with the international code of conduct. Furthermore, both Statoil and Hydro attempt to actively support the societies in which they operate by engaging in local projects<sup>289</sup>. This common ground of values and management philosophy will ease the integration of the companies, and in addition benefit the

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288 Financial Times (2006). *Statoil and Hydro in \$29bn deal*, The Financial Time Limited, 19.12.06.

289 Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

merged company, as corporate social responsibility will become an even more valuable asset in the future.

Moreover, the merger allows StatoilHydro to use the Norwegian experience and skills as an entry ticket to cooperate with national oil companies in resource-rich countries. Both companies have experience from the deep and technologically challenging waters of Norway often in harsh weather conditions. This has provided them with a reputation for cutting-edge offshore drilling and development technology, which could give them a stronger competitive advantage in the pursuit of new deals as a combined company. A company with clear ties to the Norwegian state could more easily appeal to resource rich state-owned companies in Russia and the Middle East than other privately owned western companies. Eivind Reiten of Hydro has expressed in the media that StatoilHydro should exploit the fact that they are supported by the Norwegian government and promote the company as a strong Norwegian energy champion better positioned to pursue international growth opportunities<sup>290</sup>. However, as discussed throughout this paper, this country of origin factor should not be overemphasized. Nevertheless, due to the fact that Statoil and Hydro both are committed to being socially and environmentally responsible, we believe that the new company has the potential to improve its reputation further and consequently strengthen its relationships with host governments.

#### Technological competence

Their skills and experience are complementary in the sense that both companies have experience from operating in deep waters and technologically challenging fields on the Norwegian Continental Shelf. By combining the companies' technological competences and know-how, it has the potential to fuel a faster development and greater use of new innovative technology. This will further strengthen their reputation of being among the world's leading technology-driven companies, which could provide them with a stronger competitive advantage in addressing the competition and challenges facing the oil industry today. Finally, by combining their resources, StatoilHydro is expected to be better equipped to meeting the increased demand for renewable energy sources and establish value chains for the capture and

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<sup>290</sup> Global Insight Daily (2006). *Statoil and Norsk Hydro to Merge Oil and Gas Businesses*, Global Insight Limited, 18.12.06.

storage of CO<sub>2</sub><sup>291</sup>. Nonetheless, as the companies have the same capabilities in for example offshore exploration and production, the effects of combining their technology might not provide the company with a substantial advantage. However, by cooperating more closely in the development of new technology and solutions, they might benefit from this in the future.

### The role of the state

The role of the state in this merger is not unproblematic. There are problems associated with such a large state holding in commercialised companies, as there may be conflicting interests between what creates value for shareholders and what is good for the society as a whole. In recent years, when a potential merger between Statoil and Hydro has been discussed, it has met harsh oppositions from politicians as such a merger would not be in line with Norwegian politics. The government has previously stated in the Soria Moria declaration that they want to ensure a stable activity in the Norwegian petroleum industry and that “a combination of state- and privately owned large and big players are crucial to achieve this”<sup>292</sup>. The general agreement was initially that Norway should have three oil companies, privately owned Saga, partly state-owned Hydro and fully state-owned Statoil. Today, they have merged into one company with a 62.5 percent state holding, and some fear that they have become too powerful. Another problem that arises is that the new company seeks to grow internationally, in an industry with fierce competition and in countries with high levels of political risk and often widespread corruption. Some are worried whether it is sensible that the state is so involved in the extraction of oil in countries with such demanding political regimes. Moreover, according to Ramm, a state-owned company makes sense when it operates within the domestic borders, as the state can ensure that the company acts in the best manner for the wealth of the nation. However, as the companies are expanding more abroad, the state will be more of a liability than an asset. This is because the more Statoil engages in international production, the fewer assets they will spend on efficient management of domestic resources. Hence, this weakens the argument of using the state ownership of Statoil to control the management of the Norwegian resources. Consequently, we foresee a continuous pressure for further privatisation if Statoil becomes more international. Moreover, as StatoilHydro will face tougher competition abroad, and need more financial resources to invest in acquisition targets and secure access to new reserves that are more expensive and challenging to extract,

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<sup>291</sup> Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

<sup>292</sup> Dagens Næringsliv (2006). *All makt til Helge Lund*, 19.12.06 pp. 2

they need capital. Hence, according to Ramm, it would be sensible if the state sold off some of their shares to infuse new capital into the company so that they could invest more heavily in international production. In fact, the government should have done this prior to the merger so that Statoil and Hydro could have pursued their international expansion as separate companies. By merging the two companies, Ramm does not believe that a more international company is born<sup>293</sup>.

## Conclusion

By merging with Hydro, we believe that Statoil can move up to a higher division and create new values by taking on larger and riskier projects than before. Moreover the merger will provide Statoil with greater larger financial and human resources; however, we question whether the increased size and financial and operational strength are substantial enough when competing against far larger actors. For the time being, we can understand the rationale behind the merger as Statoil will have difficulties managing on its own in an increasingly more challenging environment. However, we do not believe that this merger alone can increase Statoil international competitiveness substantially, and hence the combined entity might have to engage in a strategic alliance with an international partner with more international experience to gain complementary competences and access to new markets.

## VERTICAL MERGER

In a vertical merger, a company integrates upstream or downstream the value chain. There are many examples of oil companies adopting a vertically integrated structure. A typical vertically integrated oil company will be active all the way along the supply chain from locating crude oil deposits, drilling and extracting oil, refining it into petroleum products, to distributing the fuel to petrol stations, where it is sold to consumers<sup>294</sup>.

In order to gain international competitiveness Statoil could engage in an upstream vertical merger by joining forces with a supplier. A supplier typically develops the technology and

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<sup>293</sup> Ramm, H. H. (2007). Independent petroleum consultant, *Telephone interview*, 07.06.07.

<sup>294</sup> Wikipeda-The Free Encyclopedia. Vertical integration, available at <[http://en.wikipedia.org/wiki/Vertical\\_integration](http://en.wikipedia.org/wiki/Vertical_integration)>, 25.05.07.

provides the equipment used in the extraction and production of oil. This would provide Statoil with more in-house technological competence, and better coordination of the value chain activities<sup>295</sup>. For the purpose of this analysis we will use Aker Kværner as a potential candidate. The company is a leading international oil and gas engineering and construction group which provides construction services, technology and products to oil and gas companies<sup>296</sup>. However, we will not discuss the company's operations or competences in detail, but only use it as an example to illustrate the main advantages and disadvantages of the vertical merger alternative.

### Resource management on the NCS

The main benefits of a vertical merger would be to more effectively coordinate the value chain activities, and secure access to supplies and materials. This could be beneficial for the management of existing fields on the NCS, as Statoil could in-source more of its technology development and come up with technical solutions to more efficient resource management. Statoil's use of new technologies developed in cooperation with Aker Kværner could extend the lifespan of existing oil and gas fields, while increasing safety measures and reducing the risks of environmental issues. Nevertheless, a vertical integration may lead to reduced competition among suppliers and potentially higher costs due to lower efficiencies. This would not be good for the other actors and the competition on the NCS.

### Size and scale effects

Like with a horizontal merger, joining forces with a supplier like Aker Kværner could potentially add financial strength and human capital to Statoil. Statoil could benefit from gaining more technological expertise; however, we question whether the rest of the company's human capital would bring any additional value to Statoil along its other value chain activities. Moreover, as there is really only a fraction of Aker Kværner's operations that Statoil needs we do not believe that this alternative will provide Statoil with sufficient size and scale effects to engage in larger and more risky projects.

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<sup>295</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

<sup>296</sup> Subsea Oil & Gas Directory, Aker Kvaerner, available at <<http://www.subsea.org/company/listdetails.asp?companyID=182>> ,25.05.07.

## International presence and access to new reserves

As most suppliers, Aker Kværner engages in worldwide projects and operations. In theory, Statoil could benefit from all the areas in which Aker Kværner has experience. However, there is a tendency of convergence between the oil producing companies and the service providers. Both parties can to a great extent perform the same tasks; as the main difference between them is the degree of integration. Service providers are typically highly competent in niches while oil companies have been more integrated along the whole value chain, and have access to markets, which suppliers lack. Hence, if Statoil was to vertically integrate with a supplier, like Aker Kværner there would be a large overlap of business areas and risk of cannibalisation in competing for the same customers. Moreover, other oil companies might not want to do business with a supplier who is also a competitor. Hence, since there is only a small part of Aker Kværner's operations that Statoil could exploit, a full vertical integration could ruin the other business areas which overlap with Statoil's. Thus, it would be very challenging to integrate the two companies and transfer the role that Aker Kværner plays today into Statoil's operations<sup>297</sup>. A more ideal business model would be to form a strategic alliance with an upstream supplier to only cover a specific area in need of cooperation. This would also eliminate the problem of competing for the same customers<sup>298</sup>.

If however, the two companies could find a solution to this problem, there could be large potential for Statoil to increase its international presence through this mode. In today's fierce competition for access to new reserves, it is critical for oil companies to have strong technological competence. Statoil's use of new innovative technologies developed in cooperation with Aker Kværner could be applied in the production of new oil fields in technically challenging areas<sup>299</sup>. Hence Statoil/Aker Kværner could use their new technological competences in gaining access to new reserves internationally.

## Reputation and relationships with host governments and NOCs

As the national oil companies often lack the technology and competence in operating large and challenging projects, vertically integrated oil companies with strong technological

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<sup>297</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>298</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

<sup>299</sup> Vassbotn, P. (2006). *IBM and Statoil to develop innovative solutions for oil and gas operations*, available at <<http://www-03.ibm.com/press/us/en/pressrelease/19195.wss>>, 30.05.07.



capabilities stand out as attractive partners. According to the company's respective web site, Aker Kværner aims to be the preferred partner, and the company focuses on being a world class specialist in the execution of projects and in providing technology and solutions that provide added value to their clients<sup>300</sup>. A merged Statoil/Aker Kværner could become a technical developer and operational partner for the new resource-abundant NOCs<sup>301</sup>. Consequently, combined Statoil and Aker Kværner could increase their bargaining power internationally.

### Technological competences

A vertical merger between Statoil and Aker Kværner could create a new and different engineering-and technology based company, combining the business of oil and gas production with the technology supplier industry. This would address the current changes and challenges in the global energy market, in which the traditional oil companies no longer are as attractive for the petroleum rich countries, who want national control over their resources. This particular problem can be illustrated by the challenges that Statoil has faced in the Shtokman project in Russia. As Gazprom lacks the technological competence in extracting and producing oil, they require a partner who could provide them with the competence they lack. Hence for such a project, Statoil would be more attractive if they could offer a package solution with both competences of an oil company and technology supplier. An example of a company who has succeeded in Russia is the technology supplier Halliburton. The company has over the years cooperated closely with oil companies in developing technology used for extraction and production of oil, and is now selling their services and competences to NOCs who wants to maintain the control of resources, but need assistance on the technological side<sup>302</sup>.

### Conclusion

We believe this solution would be a good alternative to the merger, as Statoil could gain more control over the technology development and use this to their advantage in the new competition for resources, where strong technological competences has become one of the

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<sup>300</sup> Aker Kværner's website, "Oil & Gas, available at <<http://www.akerkvaerner.com/Internet/IndustriesAndServices/OilAndGas/default.htm>>, 11.06.06

<sup>301</sup> Ukebrevet-Mandag Morgen (2007). *En mulighet som glapp*, available at <<http://mandagmorgen.no/artikkel.shtml?id=2443>>, 28.01.07.

<sup>302</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

most important criteria for success. The merged Statoil/Aker Kværner could still cooperate with Hydro on certain projects such as the Shtokman field, when increased size and financial strength is required and to gain more bargaining power. However, as this particular deal would leave a very important sector of the Norwegian economy concentrated in the hand of two very large companies, this could hamper competition and harm other actors in the petroleum industry<sup>303</sup>.

## STRATEGIC ALLIANCE

Strategic alliances are also very common within the oil industry as it allows companies to cooperate on certain matters or in a particular project. Statoil has through the years been engaged in a few strategic alliances as part of their international strategy. The most recognized and also the first was an alliance with British Petroleum (BP) in 1990. This alliance lasted until 2000 and covered international exploration and production, research and development, and gas marketing. In this section we will look at the potential benefits and drawbacks of forming a strategic alliance with an international oil and gas company as an alternative route to the other expansion modes.

### Resource management on the NCS

There is a concern that the more Statoil engages in international activities, the less effort will be directed towards the management of existing resources on the NCS. This is unlikely to be a major threat in the near future, as Statoil still aims to keep NCS as its main production base, and would rather use a strategic alliance as a way to gain more foothold internationally. Another issue that could affect the management of resources on the NCS is that the company might be forced to give away some of its resources on the NCS in exchange for resources abroad. This would not necessarily lead to less efficiency in the resource management on the NCS, but will leave Statoil with less control. However, previous experience has shown that more competition and a multiplicity of players are important for increased efficiency in resource management and increased recovery rates. Moreover, alliances have proved that cooperation among oil companies can lead to synergies in sharing costs and technologies,

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<sup>303</sup> Hegnar Online (2007). *Vil ha Røkke-samarbeid*, NTB, available at <<http://www.hegnar.no/hegnar/newsdet.asp?id=243491>>, 01.02.07,

which again could improve the efficiency of existing operations. Hence, we do not believe that a strategic alliance would have a very positive or negative effect for Statoil's operations on the Norwegian Continental Shelf.

#### Size and scale effects

Traditionally, strategic alliances have been very common in the international oil industry as it has allowed companies to share the risks and costs involved in large and complex projects. Oil companies often look for partners with complementary resources either in technology or access to reserves and markets. The main benefit of a strategic alliance is that the two parties can share knowledge and learn from each other in specific areas in which they lack competence. Moreover, it is less costly than for example an M&A, as an alliance only covers cooperation on certain areas, and does not require a full integration of the two companies. The agreement between Statoil and BP is a typical example of a strategic alliance that has become increasingly widespread in the international oil arena. The two companies have in certain fields shared core-technology with each other, as well as risk and costs of projects<sup>304</sup>.

However, after the big wave of horizontal mergers in the 1990s, the main drivers for the larger companies to form alliances from a risk mitigation point of view is weakened. Hence, according to David Nunn, the IOCs today have fewer incentives to engage in strategic alliances as they are large enough to take on the risks themselves. Still, the smaller and medium sized companies such as Statoil could benefit from such an alliance in order to gain more competitive strength. Nevertheless, larger IOCs still need to cooperate in the bidding process to obtain licenses as it is unlikely that one company gets 100 percent of a license in a production field. The licensing rules vary from country to country; however, oil companies typically have to engage in a strategic alliance to achieve the operational and financial strength necessary to obtain a share of a production field<sup>305</sup>. Moreover, it is beneficial for oil companies to obtain the largest share in projects as this usually implies operatorships with more control over development of the technology and the outcome of a project. Hence, there are still incentives for oil companies to engage in strategic alliances in this area.

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<sup>304</sup> NFI Rapport for prosjekter. *Changes in the "Petro-industrial complex"*, available at <<http://dbh.nsd.uib.no/nfi/rapport/?keys=16350&language=no>>, 03.06.07.

<sup>305</sup> Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.

## International presence and access to new reserves

The exploration alliance with BP is a good example of the potential synergies that can be created through an international alliance. Many of the international licenses Statoil has today came as a consequence from this alliance. The alliance lasted for a decade and was unrolled in 2000 as the intentions for the alliance was largely fulfilled<sup>306</sup>. As the main goal for Statoil is to increase its international competitiveness, it could consider a new strategic alliance, similar to the one with BP. Today, Statoil is typically strong in technology, but lacks access to resources and markets. As the largest IOCs probably would not have any incentives to engage in an alliance with Statoil as they have the size, financial strength and technology required to engage in large and risky projects on their own, a middle-sized IOC, although larger than Statoil, would be a more realistic alliance partner for Statoil. Such an alliance could provide them with complementary competences, international experience and instant access to new reserves and markets. This would again increase their production and profitability from international activities<sup>307</sup>.

Nevertheless, strategic alliances are very challenging. Lack of aligned interests or ability to create synergies can result in large losses for the companies involved. The marketing alliance, “Alliance gas”, which Statoil formed with BP and Hydro in natural gas in the UK in 1991-92 provides an example of an unsuccessful alliance. This alliance did not turn out as expected, as the companies did not have aligned incentives. BP supplied gas to this marketing alliance in the form of a long term contract at a set price. However, when the UK market collapsed in 1995, this contract was “out of the market” and the alliance lost money on every unit sold. Consequently, BP lacked incentives to renegotiate with itself as the alternative value was a much lower market price. Hence, this contract became very demanding for Statoil and Hydro as it represented large losses. This, together with disagreements regarding other strategic choices led to the determination of Alliance Gas in 1996<sup>308</sup>.

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<sup>306</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

<sup>307</sup> Ramm, H. H. Independent petroleum consultant, *Telephone interview*, 07.06.07.

<sup>308</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

## Reputation and relationships with host governments and NOCs

If Statoil were to find an international partner with longer track record of completed international projects, this could benefit Statoil's reputation. Moreover, Statoil could use its partner's established relationships with host governments and NOCs to get access to new reserves. In Statoil's case though, the most beneficial would be a market alliance, where the company could obtain access to new markets in return for its technology or reserves on the NCS. On the other hand, a strategic alliance with a partner that are less socially and environmentally committed and perhaps has a reputation of being greedy and dominant, could potentially be harmful for Statoil's reputation. Hence, the possible gains will largely depend on what kind of reputation and relationships the potential partner has.

## Technological competences

Statoil does currently not have many alliances in which the two partners share technology, however in the BP alliance the two companies shared core-technology. Nevertheless, the company cooperates closely with the supplier industry to develop new technology projects. They invite their supplier to become part of a project at an early stage so that they can develop the technology and solutions together. This has been a very successful and important part of Statoil's strategy, and has lead to greater innovations in the technology development<sup>309</sup>. As technology is considered to be part of Statoil's core competences, this is probably the area in which Statoil would contribute the most in a strategic alliance. Nevertheless, as this technological competence is embedded in an organisation, Statoil might be reluctant to share this in the fear of partner opportunism.

## Conclusion

To conclude, strategic alliances can be extremely valuable as it is a quick way of securing access to the resources and competences the company lack. For Statoil this would include increased access to reserves and greater size and financial strength. There are however, disadvantages involved as both parties have to give up some of their control to cooperate. Moreover, there is a possibility that the two parties have conflicting interest and the outcome

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<sup>309</sup> Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

of the alliance may only benefit one of the companies. Hence, agreeing and acting on the legal terms of such contracts are crucial.

**Figure 26: Summary and comparison of Statoil’s strategic alternatives**

Strategic Alternatives Resource/Competence	Internal Development	Horizontal Merger (e.g. Hydro)	Vertical Merger (e.g. Aker Kværner)	Strategic Alliance (e.g. BP)
✓ Increased efficiency of resource management on the NCS	High	Medium	Medium	Medium
✓ Size and scale advantage	Low	Medium	Low	High
✓ Increased international presence and access to reserves	Low	Medium	Medium	High
✓ Improved reputation and relationships	Medium	High	High	Medium
✓ Improved technology	Medium	High	High	Medium

## CHAPTER 2: CONCLUSION AND RECOMMENDATION

In this section we have analysed various strategic alternatives that Statoil could pursue in its quest for further international growth. To begin with, none of the solutions can be considered ideal as there are conflicting interests at stake and they all involve tradeoffs. The main conflict relates to how Statoil can continue to be partly state-owned and ensure efficient management of the natural resources on the NCS, while at the same time gaining more weight internationally. Nevertheless, we have evaluated the four alternatives open to Statoil based on the five criteria, which we have found to be the most critical factors for success in this industry today. We have tried to rate all alternatives against each criterion according to a degree of improvement potential from low, to medium to high in order to better compare the alternatives. We have however not accounted for that the five criteria might be of more or less

importance and hence carry different weights. However, as our main focus and purpose of this paper is to determine how Statoil can grow internationally, the criteria that facilitate this are of greatest importance. As the operations on the NCS will continue to be the main production base for Statoil also in the years to come, we have decided to include this element into our discussion. However, the other four criteria mainly encompass important factors relating to increasing international competitiveness.

Firstly, we looked at internal development as a mode of expansion. We have suggested that Statoil would be able to continue to grow organically and be profitable through this mode of expansion also in the future. According to the above criteria this would be the better choice from a perspective of resource management on the NCS, however this alternative scored weaker on the four other criteria involving increased international competitiveness. Hence, we conclude that this is not the best option to pursue for increased international competitiveness. Statoil lacks the size and financial and operational strength to better compete with the largest actors in the industry as well as access to international reserves. Nevertheless, if they were to choose this alternative, the company might have to take on a new role as a technology partner for the NOCs rather than resource holder.

As the horizontal merger between Statoil and Hydro is the alternative which the companies have chosen to pursue, we have put our main emphasis on this. The success of the merger with Hydro will partly depend on Statoil's ability to take effective advantage of growth opportunities and to achieve efficiency improvements and other synergies. We have identified the complementary technological competences and similar foundation for a good reputation to be the most important factors behind the deal. Moreover, the size effect including increased operational, human, and financial strength and combined operations internationally will assist Statoil to a certain degree in increasing its international competitiveness. Hence, as the merger will create a larger organisation with more assets and a broader competence level, the merged StatoilHydro can take on larger and more complex projects than what the two companies could separately. However we argue whether this size effect is substantial enough to make a significant difference on the international arena. Moreover, we question whether the merger with Hydro will be the best alternative in Statoil's ambition of increased internationalisation as both companies' operations are so heavily focused on the NCS, and their competences are very similar. There is also broad discussion whether the merger will lead to more efficient management of resources on the NCS or if it will limit the domestic competition and

diversity. Although the combined entity is expected to stand stronger in the international competition, they will have to start more from scratch than if Statoil were to join forces with an international partner. This is because both companies international experience are limited and today they mainly operate in the same countries internationally. As for the role of the state, a merger between Statoil and Hydro would leave the new company far more state dominated than by the other strategic alternatives, and as we have discussed this might not be so beneficial on the international arena. Nevertheless, according to the criteria above this alternative comes out as one the strongest. Moreover, taking into account the various constraints on the company being so largely influenced by the state, for the time being this might be the best alternative. This is however, not to say that the companies should exclude the other alternatives also after the merger.

The third alternative is a vertical merger with an upstream supplier. For the purpose of this analysis, we have considered Aker Kværner to be a potential candidate for Statoil. A vertical merger between Statoil and a supplier like Aker Kværner would allow the company to in-source more of the technology development and use this to become an attractive partner for the NOCs. Hence, the increased technological competence together with a reputation of being a strong oil engineering-and technology based company, would allow the company to compete on different terms and stand out as an attractive partner for host governments and NOCs. Nevertheless, it would not provide Statoil with instant access to more resources, as suppliers do not have market access. Moreover, a vertical merger would perhaps not increase the size of the company to a large extent as many of the business areas of the two companies would be overlapping and hence redundant. Nevertheless, this alternative would definitely be a viable option for Statoil to increase its international competitiveness.

The fourth and final alternative is a strategic alliance with a larger international oil and gas company. The most outstanding factors in this case are greater size combined with increased international presence and access to new reserves. A strategic alliance would also make the company better able to deal with host governments and NOCs if the partner has longer international experience and more established relationships than Statoil. However, merging with a larger international actor would definitely mean loss of certain control and possible conflicts with the role of the state. Nevertheless, this alternative obtains the same score as the merger with Hydro and should absolutely be worth considering.



As a conclusion we do not think that there are any clear cut answers to how Statoil should improve its international competitiveness in the best manner. As we can see from the summary in figure 26, the strategic alternatives involves trade offs. Moreover, the competitive picture and the forces shaping the industry are constantly changing. The role that Statoil aims for in the future should also be reflected in their internationalisation strategy. In the way it is possible Statoil wishes to continue as operator and owner of recourses as they have done and are doing in the North Sea and OECD countries. Clearly, if Statoil aims to become a major natural resource holder our findings suggest that engaging in a strategic alliance would be the best alternative. However it might not increase its international competitiveness substantially, as the traditional IOCs are currently the worst performers of the industry. Consequently Statoil might be better off with focusing on niche segments. With the trend towards further resource nationalisation, the company needs to consider revising its business model and move in the direction of a provider of project management and technological expertise to the national resource owners. In this context a vertical merger with a supplier will be a better way for Statoil to improve its competitiveness. Taken Statoil's current strategic position into consideration we believe that the merger with Hydro is the best viable alternative at the time being. It might not be the alternative which grants it the largest international presence or access to natural resources. Yet, this solution might be the only one that Statoil could actually pursue, given the state ownership and interest. It is easier to get public and political support and also the only way the government and probably also Statoil could maintain control over their operations. Nonetheless, Statoil needs to consider other alternatives even after an eventual merger to keep pace with the trends in the industry and properly take advantage of the growth opportunities in the market.

## GLOSSARY

**Barrel of oil equivalent (Boe):** Oil and gas volumes expressed as a common unit of measurement. One boe is equal to one barrel of crude, or 159 standard cubic metres of gas<sup>310</sup>.

**IEA:** International Energy Agency

**IOC:** International Oil Company

**LNG:** Liquefied Natural Gas

**MNE:** Multinational Enterprise

**NCS:** Norwegian Continental Shelf

**NOC:** National Oil Company

**OECD:** Organisation for Economic Co-operation and Development. The OECD is a unique forum where the governments of thirty democracies work together to address the economic, social and environmental challenges of globalisation. Members include; Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States<sup>311</sup>.

**OPEC:** Organization of Petroleum Exporting Countries. It is an intergovernmental organization dedicated to the stability and prosperity of the petroleum market. Member

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<sup>310</sup> Statoil (2006), *Annual report*, available at <http://www.statoil.com/INF/SVG03636.NSF?OpenDatabase&lang=en&app=2006year>, 30.04.07.

<sup>311</sup> OECD's website, available at [http://www.oecd.org/pages/0,3417,en\\_36734052\\_36761800\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/pages/0,3417,en_36734052_36761800_1_1_1_1_1,00.html), 17.06.07

countries: Saudi Arabia, Algeria, Angola, Indonesia, Iran, Iraq, Kuwait, Nigeria, Libya, Qatar, United Arab Emirates and Venezuela<sup>312</sup>.

**PSA :** Production Sharing Agreement

**PSC:** Project Sharing Contract

**Reserve replacement ratio:** Additions to proved reserves, including acquisitions and disposals, divided by volumes produced<sup>313</sup>.

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<sup>312</sup> OPEC's website, available at <[www.opec.org/home](http://www.opec.org/home)>, 13.05.07

<sup>313</sup> Statoil (2006), *Annual report*, available at <<http://www.statoil.com/INF/SVG03636.NSF?OpenDatabase&lang=en&app=2006year>>, 30.04.07.

# BIBLIOGRAPHY

Aker Kværner's website, *Oil & Gas*, available at <<http://www.akerkvaerner.com/Internet/IndustriesAndServices/OilAndGas/default.htm>>, 11.06.06

Answers.com, *Biomass*, available at <<http://www.answers.com/topic/biomass>>, 20.05.07

Answers.com, *Hydropower*, available at <<http://www.answers.com/topic/hydropower-1>>, 20.05.07

Associated Press Newswires (2006). *Norway's Statoil acquires Oil and Gas operations of Norsk Hydro*, The Associated Press, 18.12.06.

Barnett, W., Greve, H., and Park, D. (1994). An evolutionary model of organizational performance, *Strategic Management Journal*, Vol. 15, Special Issue: Competitive Organizational Behaviour, (Winter, 1994), pp. 11-28.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage, *Journal of Management*, Vol. 17, pp. 99-120.

Barney, J. (1997). Gaining and Sustaining Competitive Advantage, *Strategic Management Journal*, Vol. 15, pp. 131-148.

Barney, J. (2001). Is the resource-based "View" a useful perspective for strategic management research? Yes. *Academy of Management Review*, Vol. 26, pp. 41-56.

BBC News (2004). *Statoil fined over Iranian bribes*, available at <<http://news.bbc.co.uk/2/hi/business/3849147.stm>>, 13.06.07.

BBC News (2004). *What to use when the oil runs out*, available at <<http://news.bbc.co.uk/1/hi/sci/tech/3623675.stm>>, 20.05.07.

Bryman, A. (2005). *Social Research Methods*, 2<sup>nd</sup> edition, Oxford University Press.

Bunter, M. (2003). *A new approach to petroleum licensing*, Oil, Gas & Energy Law Intelligence, Volume 1, issue # 01, available at <[http://www.gasandoil.com/ogel/samples/freearticles/roundup\\_15.htm](http://www.gasandoil.com/ogel/samples/freearticles/roundup_15.htm)>, 17.06.07.

Business Monitor International (2006). *Nigeria: Risk Summary*. *West & Central Africa Monitor*; December, Vol. 7 Issue 12.

Calcagno, M. (undated). *The Evolution of the Competitive Advantage Concept in Strategic Management Studies*, Ca' Fooscari University, available at <<http://www.bbk.ac.uk/manop/research/wpapers/mandocs/calcagno99-02.PDF>>, 15.04.07.

- Cantwell, J. and Narual, R. (2003). *International Business and the Eclectic Paradigm. Developing the OLI framework*, Routledge Studies in International Business and the World Economy.
- Cockburn, I., Henderson, R. and Stern, s. (2000). Untangling the origins of competitive advantage, *Strategic Management Journal*, Vol. 21, pp. 1123-1145.
- Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2nd edition, Boston, Mass: McGraw-Hill/Irwin.
- Conner, K. R. and Prahalad, C. K. (1996). A Resource-Based Theory of the Firm: Knowledge versus Opportunism, *Organization Science*, Vol. 7, No. 5 (Sep. - Oct., 1996), pp. 477-501.
- Dagens Næringsliv (2006). *All makt til Helge Lund*, 19.12.06
- Dagens Næringsliv (2006). *Redd for oljegiganten*, 21.12.06.
- Datamonitor (2006) *Global Oil & Gas, Industry profile*, available at <[www.datamonitor.com](http://www.datamonitor.com)>, 25.05.07.
- Deutsche Bank (2006). European Integrated Oils, Angola – Increasing OPEC’s influence, Deutsche Bank AG/London, 04.12.06.
- Dierickx, I. and Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage, *Management Science*, Vol. 35, No. 12 (Dec. 1989), pp. 1504-1511.
- Dorf, R. C. and Byers, T. H. (2005). *Technology Ventures-from Idea to Enterprise*, International edition, McGraw-Hill.
- Dunning, J. (1980). Toward an eclectic theory of international production: Some empirical tests, *Journal of International Business Studies*, Vol. 11, No. 1 (Spring - Summer, 1980), pp. 9-31.
- Dunning, J. H. (1985). International production and the multinational enterprise, *Journal of International Business Studies*, Vol. 16, No. 1 (Spring, 1985), pp. 171-173.
- Dunning, J. H., (1988). The eclectic paradigm of international production: A restatement and some possible extensions, *Journal of International Business Studies*, Vol. 19, No. 1, Spring, 1988, pp. 1-31.
- Dunning, J. H. (2001). *The eclectic (OLI) paradigm of international production: Past, present and future*. International Journal of the Economics of Business, Volume 8, No. 2, (July 2001), pp. 173-190.
- E24. *Kan miste olje for 50 milliarder*, available at <<http://e24.no/boers-og-finans/article1700346.ece>>, 21.03.07.
- Financial Times (2006). *Statoil and Hydro in \$29bn deal*, The Financial Time Limited, 19.12.06.

Financial Times (2006) *Statoil-Hydro merger foresees the future*, Financial Times Limited, 19.12.06.

Fuel Focus, Natural Resources Canada, *Glossary of Terms*, available at <[http://www.fuelfocus.nrcan.gc.ca/gloss\\_e.cfm](http://www.fuelfocus.nrcan.gc.ca/gloss_e.cfm)>, 20.05.07.

Gallagher, S. (2006). *Why do firms differ-Internal Analysis*, available at <<http://falcon.jmu.edu/~gallagr/WDFPD-Internal.pdf>>, 10.04.07.

Global Insight Daily (2006). *Statoil and Norsk Hydro to Merge Oil and Gas Businesses*, Global Insight Limited, 18.12.06.

Griffin, R. W. and Pustay M. W. (2005). *International Business: A managerial perspective*, 4<sup>th</sup> edition, New Jersey: Pearson Prentice Hall-Pearson Education International.

Gulati, R. (1998) Alliances and networks, *Strategic Management Journal*, 19, pp. 293 in Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

Hegnar Online (2007). *Vil ha Røkke-samarbeid*, NTB, available at <<http://www.hegnar.no/hegnar/newsdet.asp?id=243491>>, 01.02.07.

Hitt M., Ireland D., and Hoskisson R., (2005). *Strategic management: Competitiveness and Globalisation*, 6th edition. Mason, Ohio : Thomson/South-Western.

HSBC (2007). *Company report, Statoil*, HSBC Global Research, 14.03.07

Human Rights Watch, *International law*, available at <<http://www.hrw.org/reports/1999/nigeria/Nigew991-11.htm>>, 05.05.07.

Huseyinov, T. (2005). *Global Politician Oil Wars: US Companies against China, Russia and India*, available at <<http://www.globalpolitician.com/articleshow.asp?ID=1480&cid=7>>, 18.06.07.

IEA (2005). *Resources to Reserves. Oil & Gas Technologies for the Energy markets of the future*, available at <[http://www.iea.org/Textbase/publications/free\\_new\\_Desc.asp?PUBS\\_ID=1568](http://www.iea.org/Textbase/publications/free_new_Desc.asp?PUBS_ID=1568)>, 10.03.07

IEA (2004). *World Energy Outlook*, available at <<http://www.iea.org/textbase/nppdf/free/2004/weo2004.pdf>>, 01.05.07.

IEA (2006). *Renewables in Global Energy Supply-an IEA Fact Sheet*, available at <<http://www.solarwaerme.at/docs/174.pdf>>, 05.05.07.

IEA, (Undated). *30 Key Energy Trends in the IEA & Worldwide*, available at <[http://www.iea.org/textbase/nppdf/free/2005/energy\\_trends.pdf](http://www.iea.org/textbase/nppdf/free/2005/energy_trends.pdf)>, 20.04.07.

- Investopedia. *The Industry handbook-Oil Services Industry*, available at <[http://www.investopedia.com/features/industryhandbook/oil\\_services.asp](http://www.investopedia.com/features/industryhandbook/oil_services.asp)>, 15.04.07
- Investopedia. *Merger of Equals*, available at <[http://www.investopedia.com/terms/m/merger\\_of\\_equals.asp](http://www.investopedia.com/terms/m/merger_of_equals.asp)> , 12.06.07
- IPIECA & OPG, (2002). *The oil and gas industry from Rio to Johannesburg and beyond. Contributing to sustainable development*, available at <<http://www.iecea.org/downloads/WSSD.pdf>>, 30.03.07.
- Johnson, G., Scholes, K. & Whittington, R. (2005). *Exploring Corporate Strategy*, 7<sup>th</sup> edition. Harlow, US: Financial Times Prentice Hall.
- Kanie, N. (2004). *Emerging Forces in Environmental Governance*. Tokyo, Japan: United Nations University Press, available at <<http://site.ebrary.com/lib/jonhh/Doc?id=10074970>>, 10.04.07.
- Karl, T.L., (1997). *The Paradox of Plenty: Oil Booms and Petro-States*, University of California Press, available at <[http://www1.transparency.org/integrity\\_pact/dnld/tiq-sept2003.pdf](http://www1.transparency.org/integrity_pact/dnld/tiq-sept2003.pdf)>, 23.05.07>, 01.06.07.
- Kessides, I. (2004). *Reforming Infrastructure : Privatization, Regulation, and Competition*. Washington, USA: Oxford University Press. available at <<http://site.ebrary.com/lib/jonhh/Doc?id=10056608>>, 01.04.07
- Kolodziej, A. and Niesyto. K. (2006). *M&A as a way to create value-case of Norsk Hydro ASA*, Master Thesis, NHH.
- Kostova, T. and Roth, K. (2003). Social capital in multinational corporations and a micro-macro model of its formation, *Academy of Management Review*, Vol. 28, pp. 297-317.
- Ling, A. (2004). *Our experience in Energy: Social & Environmental Issues Count*, Goldman Sachs Investment Research. 16.06.04.
- Lipman, S. and Rumelt, R. (1982 ). Uncertain Imitability: An Analysis of Interfirm Differences in Efficiency under Competition , *The Bell Journal of Economics*, Vol. 13, No. 2 (Autumn, 1982), pp. 418-438.
- Management Modern, Business Environment, available at <[http://telecollege.dcccd.edu/mgmt1374/book\\_contents/1overview/business\\_environment/bus\\_envior.htm](http://telecollege.dcccd.edu/mgmt1374/book_contents/1overview/business_environment/bus_envior.htm)>, 02.04.07
- Markusen, J. R. (1995). The Boundaries of Multinational Enterprises and the Theory of International Trade. *Journal of Economic Perspectives*-Volume 9, No. 2, (Spring 1995), pp. 169-189.
- McEvily, S. and Chakaravarthy, B. (2002). The persistence of knowledge-based advantages, *Strategic Management Journal*, Vol. 23, pp. 285-305.

- Mind Tools, *PEST analysis*, available at  
<[http://www.mindtools.com/pages/article/newTMC\\_09.htm](http://www.mindtools.com/pages/article/newTMC_09.htm)>, 01.04.07
- Minde, N., (2000). *Dunning's eclectic paradigm applied on Jotun in Thailand*, SNF Report No. 64/00, SIØS Centre for International Economic and Shipping.
- Mosakowski, E. (1998). Entrepreneurial resources and organizational choices, *Organization Science*, Vol. 9, No. 6 (Nov. - Dec., 1998), pp. 625-643.
- Morgan Stanley (2006). *Oil & Gas Twilight Zone*, Morgan Stanley Research Europe, 21.07.06.
- Morgan Stanley (2006). *Oil & Gas, Statoil and Norsk Hydro propose merger*, Morgan Stanley Research Europe, 19.12.06.
- Morgan Stanley (2007). *Oil & Gas, the value in Europe*, Morgan Stanley Research, 29.01.07.
- NFI Rapport for prosjekter. *Changes in the "Petro-industrial complex"*, available at  
<<http://dbh.nsd.uib.no/nfi/rapport/?keys=16350&language=no>>, 03.06.07.
- NGVAMERICA, *Natural gas for Transportation*, available at <[www.ngvc.com](http://www.ngvc.com)>, 25.05.07.
- Nuebecker, L. and Stadler, M. (2003). *In Hunt for Size-Merger Formation in the Oil Industry*, in Kolodziej A. and Wojchiech, N. (2006). *M&A as a way to create value-case of Norsk Hydro ASA*, Master thesis, NHH.
- Nunn, D. W. Senior Vice President, Portfolio Strategy, Norsk Hydro. *Personal interview*, 20.05.07.
- Nunn, D. W. *Restructuring Hydro – The StatoilHydro merger*, Presentation to The Conference Board Pensions Council, Oslo 10.05.2007.
- O'Connor, D. (2000). *Business planning*. Broadstairs, UK: Scitech Educational., available at  
<<http://site.ebrary.com/lib/jonhh/Doc?id=10040407>>, 05.04.07
- OECD's website, available at  
<[http://www.oecd.org/pages/0,3417,en\\_36734052\\_36761800\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/pages/0,3417,en_36734052_36761800_1_1_1_1_1,00.html)>, 17.06.07
- Oilvoice, *Production and reserves data for all companies-Statoil*, available at  
<<http://www.oilvoice.com/m/viewProdRes.asp?id=179>>, 17.06.07.
- OPEC's website, available at <[www.opec.org/home](http://www.opec.org/home) 13.05.07>, 05.05.07.
- OPEC (2005). *OPEC's share of World Crude Oil Reserves*, available at  
<<http://www.opec.org/home/PowerPoint/Reserves/OPEC%20share.htm>>, 15.05.07.
- Parker, R. G., (2000). *Solutions to Competitive Problems in the Oil Industry*, available at  
<<http://www.ftc.gov/os/2000/03/opectestimony.htm>>, 24.05.07.



Peng, M. W. (2006). *Global Strategy*, International student edition, South-Western, Thomson Corporation.

Penrose, E. (1959). *The Theory of the Growth of the Firm*, London: Basil Blackwell in Collis, D. J. and Montgomery, C. A. (2005). *Corporate Strategy: a Resource-based Approach*, 2<sup>nd</sup> edition, Boston, Mass: McGraw-Hill/Irwin

Porter, M. E. (1998). *Competitive strategy: techniques for analyzing industries and competitors: with a new introduction*, New York: Free Press.

Proposition to the Storting (2007). *Merger between Statoil and Hydro's petroleum business*, Press release, Ministry of Petroleum and Energy, No. 52/07, 30.03.07.

Ramm, H. H. Independent petroleum consultant, *Telephone interview*, 07.06.07.

ResearchandMarket, *Global Integrated Oil & Gas*, available at <[http://www.researchandmarkets.com/reports/340664/global\\_integrated\\_oil\\_and\\_gas.htm](http://www.researchandmarkets.com/reports/340664/global_integrated_oil_and_gas.htm)>, 01.03.07

Reuters (2007), *Oil & Gas-Integrated : Overview*, available at <<http://www.investor.reuters.com/business/IndustryDmDescr.aspx?industry=OILINT&target=%2fbusiness%2fbussecindustry%2fbussecindfake%2fbussecindoverview&page=dmdescr>>, 03.05.07.

Root, R. (1998) *Entry Strategies for International Markets – revised and expanded*, San Francisco, US: Jossey-Bass.

Schjelderup, G. (1999). *Strategic Choices in a Global Environment: The Behaviour of the Multinational Firm*, NHH, in Minde, N., (2000). Dunning's eclectic paradigm applied on Jotun in Thailand, SNF Report No. 64/00, SIØS Centre for International Economic and Shipping.

Sirower, M. L. (1997). *The synergy trap : how companies lose the acquisition game*, New York : Free Press.

Snorre Platform <[http://www.ptil.no/NR/rdonlyres/F9608E69-81D1-440A-9BEF-7C088C766733/7305/snorre\\_a550x375.jpg](http://www.ptil.no/NR/rdonlyres/F9608E69-81D1-440A-9BEF-7C088C766733/7305/snorre_a550x375.jpg)> ,19.06.07.

Subsea Oil & Gas Directory, Aker Kvaerner, available at <<http://www.subsea.org/company/listdetails.asp?companyID=182>> ,25.05.07.

Statoil's website, available at <[www.statoil.com](http://www.statoil.com)>, 13.03.07.

Statoil's website, *Statoil and sustainable development 2005*, available at <<http://www.statoil.com/INF/SVG03595.NSF/UNID/4E3794A5768DB23EC125713D0052E6BF?OpenDocument>>, 01.06.07.

Statoil's website, *Annual report 2006*, available at <<http://www.statoil.com/INF/SVG03636.NSF?OpenDatabase&lang=en&app=2006year>>, 30.04.07.

Sudarsanam S. (2003). *Creating Value from Merger and Acquisitions - The Challenges*, Prentice Hall-Financial Times.

Sweeney, P. (2006). *M&A looks Hot, Energy Hotter Still*, Financial Executive, in Kolodziej A. and Wojchiech, N. (2006). M&A as a way to create value-case of Norsk Hydro ASA, Master thesis, NHH.

The Free Dictionary, *Biomass*, available at <<http://www.thefreedictionary.com/Biomass>>, 20.05.07.

The Industry Handbook, *Oil Services Industry*, available at <[http://www.investopedia.com/features/industryhandbook/oil\\_services.asp](http://www.investopedia.com/features/industryhandbook/oil_services.asp)>, 20.05.07.

The Wall Street Journal-Online (2006), *Norsk Hydro-Statoil Marriage is Sensible in Competitive Arena*, available at <<http://online.wsj.com/article/SB116648975683553959.html>>, 19.12.06

The Wall Street Journal Online (2006). *Statoil, Norsk Hydro Create an Energy Behemoth*, available at <<http://online.wsj.com/article/SB116642748971353246.html>> , 19.12.06.

Tjersland, R. Senior Vice President, Corporate Strategy, Statoil. *Telephone interview*, 05.06.07.

TNO, *Full value chain Gas market simulation*, available at <<http://www.tno.nl/downloads%5C308beno.pdf>>, 15.06.07

Toal, B. A. (1999). *'The Land of Giants'*. *Oil and Gas Investor*; in Hosaka, S. (2004) "Japanese Business Strategy in the International Oil Industry, The Florida State University.

Ukebrevet-Mandag Morgen (2007). *En mulighet som glapp*, available at <<http://mandagmorgen.no/artikkel.shtml?id=2443>>, 28.01.07.

UBS Investment Research (2006). *Oil Companies, Major- Global Analyzer*, UBS Limited, 05.12.06.

Vassbotn, P. (2006). *IBM and Statoil to develop innovative solutions for oil and gas operations*, available at <<http://www-03.ibm.com/press/us/en/pressrelease/19195.wss>>, 30.05.07.

Vatne, E. (2000). *Global markets-local competence? Internationalisation of the Norwegian petroleum industry*, Working paper 78/00, SNF-project No 4225: Norwegian petroleum industry abroad.

Washington post (2005). *National Oil Firms Take Bigger Role Governments Hold Most of World's Reserves*, available at <<http://www.washingtonpost.com/wpdyn/content/article/2005/08/02/AR2005080201978.html>>, 15.06.07.

Wawryk, A. S., (2003). *International Environmental Standards in the Oil Industry: Improving the Operations of Transnational Oil Companies in Emerging Economies*, available at <[http://www.gasandoil.com/ogel/samples/freearticles/roundup\\_09.htm](http://www.gasandoil.com/ogel/samples/freearticles/roundup_09.htm)>, 30.03.07

Wernerfelt, B. (1984). A Resource-based View of the Firm, *Strategic Management Journal*, Vol. 5, pp. 171-180.

Wikipedia-The Free Encyclopedia. *Vertical integration*, available at <[http://en.wikipedia.org/wiki/Vertical\\_integration](http://en.wikipedia.org/wiki/Vertical_integration)>, 25.05.07.

Wærness, E. Director of Group Planning and Analysis, Statoil. *Personal interview*, 30.01.07.

Yergin, D. (1993). *The Prize: The Epic Quest for Oil, Money, and Power*. Touchstone, New York. in Hosaka, S. (2004) Japanese Business Strategy in the International oil Industry, The Florida State University.